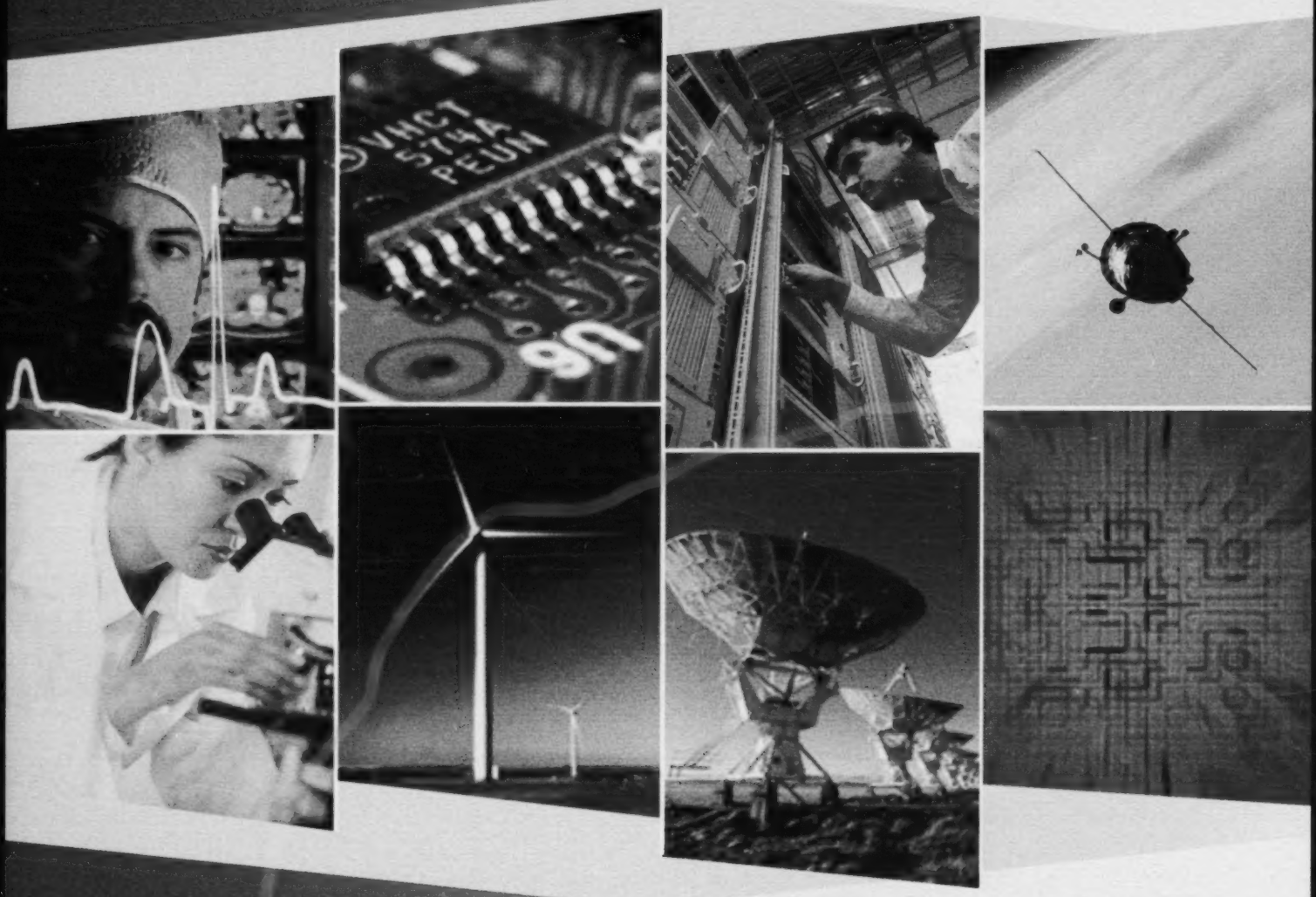
PROFILE OF THE
BRITISH COLUMBIA

# HIGH TECHNOLOGY SECTOR

2010 EDITION



Western Economic Diversification Canada
Diversification de l'économie de l'Ouest Canada

Canada

BRITISH COLUMBIA | BCStats

Prepared for:

Ministry of Jobs, Tourism and Innovation,
Ministry of Labour, Citizens' Services and Open Government and
Western Economic Diversification Canada

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Western Economic Diversification Canada works with the provinces, industry associations and communities to promote the development and diversification of the western economy, coordinates federal economic activities in the West and represents the interests of western Canadians in national decision-making.

July 2011

This paper was prepared by Dan Schrier and Lillian Hallin of BC Stats

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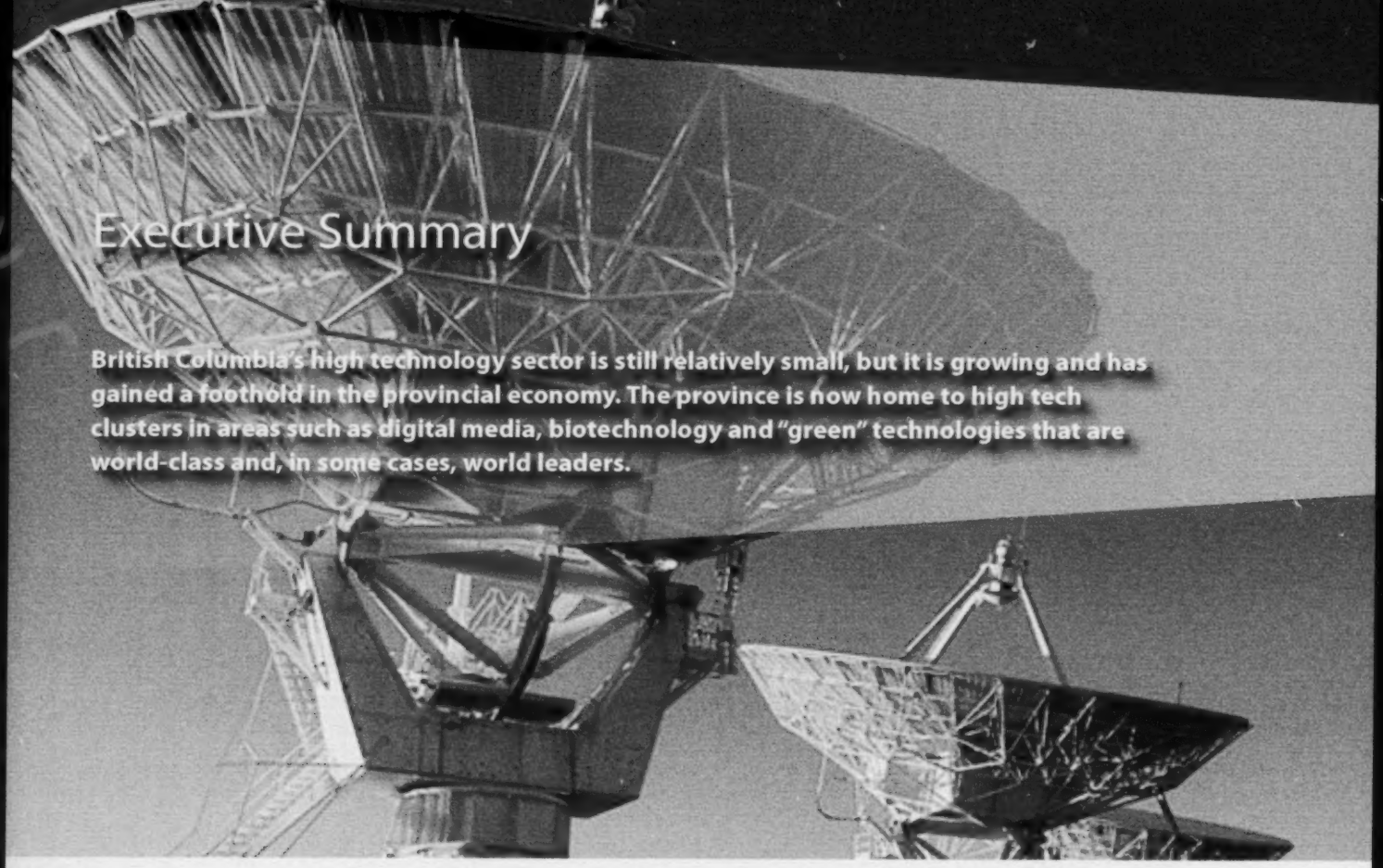
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# Executive Summary

**British Columbia's high technology sector is still relatively small, but it is growing and has gained a foothold in the provincial economy. The province is now home to high tech clusters in areas such as digital media, biotechnology and "green" technologies that are world-class and, in some cases, world leaders.**

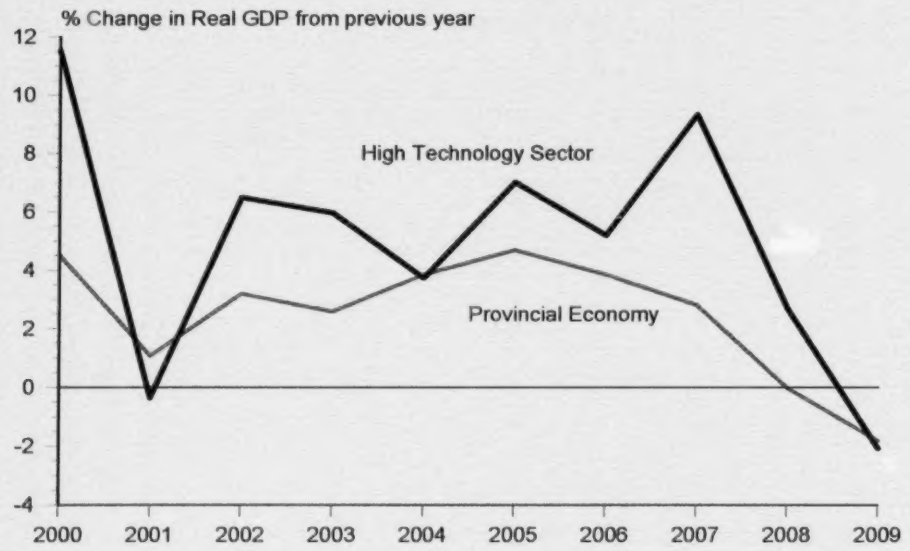
### B.C.'s high technology sector took a step back in 2009

In 2009, the global economic downturn had a dampening effect on British Columbia's economy as a whole and the high technology sector did not escape unscathed. B.C.'s high technology gross domestic product (GDP) fell 2.1% to $9.3 billion (note that GDP data are constant dollar figures, whereas all other indicators are unadjusted for inflation). The high tech manufacturing sector was hit hardest by the global economic downturn, with GDP slumping 9.6%, but the high tech service sector also saw a decline in GDP, albeit a more modest 1.2%.

For the most part, 2009 represents an anomaly in terms of GDP growth in that British Columbia's high technology sector has typically outperformed the economy as a whole over the last decade. The only exceptions occurred in 2001, when high tech was suffering the effects of the dot.com crash, and in 2004, when growth in high tech GDP was marginally lower than that of the economy overall. Nevertheless, high technology accounted for approximately 5.9% of British Columbia's overall economic output in 2009.

The downturn was reflected in high tech revenues as well. After seven consecutive years of increases, revenues in British Columbia's high technology sector fell 3.2% in 2009, to $18.9 billion. The slump was particularly precipitous in the manufacturing sector, where revenues dropped 12.6%, but the service sector also saw a modest 1.6% decline in revenues.

**B.C.'s high tech sector was hit harder by the global economic downturn compared to the overall provincial economy**




**In most years, B.C.'s high tech sector has outperformed the overall economy, but 2009 proved an exception**

### High tech employment fell, but wages continued to rise

There was also a reduction in employment as high tech jobs in B.C. dipped 2.2% to 83,670. Most of the decline was in the manufacturing sector, where the number of jobs fell 10.4%, but there were also 0.5% fewer jobs in the service sector. Overall, the high technology sector employed approximately 4.4% of British Columbia's work force in 2009. There were almost twice as many British Columbians working in high tech industries than there were in the forest sector.

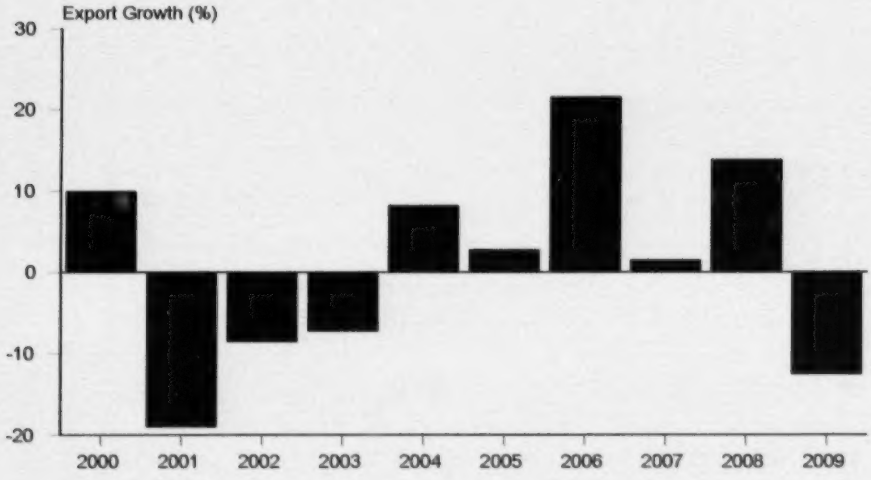
Despite the economic downturn and the drop in high tech employment, aggregate wages and salaries in British Columbia's high tech sector continued to rise, climbing 1.4% in 2009, to more than $5.3 billion, the highest level ever recorded. At $1,220, average weekly earnings in the high tech sector are far higher than the overall B.C. average weekly wage rate of $800.

The number of high technology businesses in B.C. (excluding those with no employees) also continued to climb in 2009, inching up 0.8% to 8,903. Approximately 92% of these businesses were in service sector industries. There were another 18,753 businesses in the high technology sector with no employee payroll (which can be seen as a proxy for the number of self-employed people with no paid help), bringing the total number of high tech businesses to 27,656 in 2009.

### Exports and imports of high tech goods fell in 2009

International trade is an important aspect of the high technology sector, as reflected in the high volume of two-way trade. The domestic market for high technology goods does not have sufficient volume to achieve the economies of scale needed to remain competitive and, in some cases, B.C. manufacturers do not produce enough of some types of goods to satisfy domestic demand. As such, both exports and imports play an important role in B.C.'s high tech sector.

**B.C. high technology exports fell in 2009**




**In 2009, B.C.'s high tech exports recorded their largest decline since the dot.com crash**

The economic downturn dampened demand for many types of goods, including high tech products. In 2009, the value of British Columbia high technology goods exports fell to $865.2 million, a 12.5% decline, which was the largest one-year drop since the dot.com crash in 2001. Nevertheless, B.C.'s high tech sector exports fared far better than B.C.'s overall goods exports, which dropped 24.3%. As a result, the proportion of overall exports comprised of high technology goods climbed to 3.4%, the highest share ever recorded.

The slump in high technology exports was spread across many destinations, including B.C.'s largest market, the United States, to which high tech shipments fell 5.7% in 2009. Exports of high tech products to the European Union plunged 34.1% and shipments to the Pacific Rim dropped 14.1%, despite a 70.2% jump in exports to Hong Kong and a 25.5% growth in shipments to Australia. Those gains were more than offset by double-digit drops in high tech exports to Japan (-52.5%), Mainland China (-36.3%), South Korea (-38.5%) and Taiwan (-54.1%).

Similar to exports, the value of high technology goods imported into the province also fell in 2009, dropping 10.9%. Imports from the United States fell 13.7% to their lowest level since 1993. For the first time since B.C.'s high tech imports have been measured, imports from Mainland China dropped, slipping 1.3%.

British Columbia imports substantially more high technology goods than it exports and, as a result, the province runs a trade deficit in these commodities. In 2009, this trade gap narrowed significantly as the drop in imports was far larger than the slump in exports. Nevertheless, the deficit was still $3.3 billion, or nearly four times the total value of B.C.'s high tech exports.

Computers and telecommunications products dominate both exports from and imports to British Columbia, with aerospace goods and life sciences products (which are mainly comprised of medical equipment) the next two most important commodity groups.

As important as trade in goods is to B.C.'s high tech sector, it is still small compared to trade in services. In 2009, the value of high tech service exports was almost four times that of international shipments of high tech goods. The value of high tech service exports from B.C. dipped 0.5% in 2009, despite a 30.0% jump in exports from the motion picture production and post-production industry.

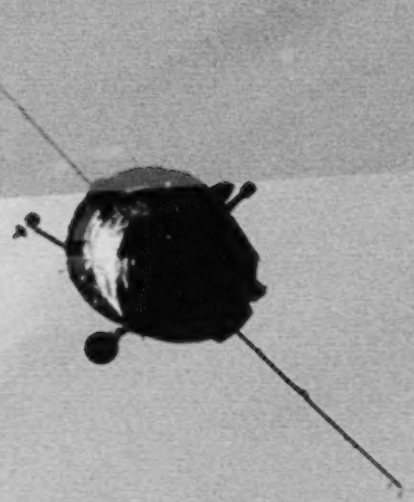
**B.C. still has a relatively small high tech sector compared to other jurisdictions**

British Columbia's high technology sector ranked fourth among the provinces in GDP, revenue and business counts, but had the third largest employment count and also ranked third in average weekly earnings and value of international exports. The province has a much smaller high tech sector than the majority of U.S. states as well, with high technology making up a far smaller share of employment and GDP than most states.

Nevertheless, the sector has undergone significant expansion in the last decade and is becoming a more integral part of the provincial economy, employing more people than B.C.'s traditional economic powerhouses, the forestry and mining industries, combined. Given high tech's penetration of all aspects of society, it is likely that B.C.'s tech sector will continue to prosper and evolve.

# Introduction

**The *Profile of the High Technology Sector* is part of an ongoing project to monitor the growth and performance of the high technology sector in British Columbia by evaluating the economic contribution of firms that produce high technology goods and services. The key indicators examined include gross domestic product, revenue, employment, wages and salaries, business counts and international trade.**



### The study of high technology

The characterization of a high technology sector within traditionally defined industrial sectors of the economy provides a very useful analytic tool. This is based on the premise that high technology firms behave in a way that allows them to be understood as a group, and that programs or policies can be tailored to respond to their needs.

### Defining high technology

In general terms, high tech is defined as technology that is at the cutting edge and is usually associated with strong economic growth and advanced technological development. Since research and development (R&D) is a key factor in technological advancement, those industries that perform a significant amount of R&D often have a considerable high tech component. However, an industry does not necessarily need to be R&D intensive to be considered high tech. Industries that produce goods or services that are uniformly recognized as high tech outputs are also included in the high technology sector. The concept of the high technology sector used in this report is basically product-based; therefore, some manufacturers that employ advanced processes are not included. In other words, just because a good is produced using advanced processes does not automatically make it a high tech product. For example, a mushroom produced in a high tech greenhouse is still just a mushroom.

There are many different definitions of high technology in use around the world. This report uses two different definitions—one that is industry-based and another that is commodity-based—to measure, respectively, high tech's contribution to the British Columbia economy and the volume of international trade in high technology goods.

Since the inception of the *Profile* reports in 1996, statistics on the high technology sector have been constructed using information from standard industries defined under the North American Industry Classification System (NAICS).[1] This industry-based approach offers consistency with other Statistics Canada data, as well as comparative data for other provinces and the United States, with a reasonable degree of accuracy.

It should be noted that the high technology definition used by BC Stats is a British Columbia-focused classification. Some high technology industries that are not present in British Columbia, but may be prevalent elsewhere, may be excluded from the data presented in this report. Conversely, some industries that have a substantial high tech component in British Columbia and are therefore included in the high technology sector may be mainly low tech in other regions. For example, the fuel cell industry is included in the NAICS classification 335990 (all other electrical equipment and component manufacturing), which is generally not considered a high technology industry. However, given the presence of the fuel cell cluster in B.C., it makes sense to include it in B.C.'s high tech sector definition.

The industry-based definition includes manufacturers of pharmaceuticals and other chemicals, computers and other electronic products, aerospace products and parts, and medical equipment and supplies. Also included are service industries such as engineering, computer services, motion picture and video production, surveying and mapping, scientific and technical consulting, telecommunications, and research and development.

For a more detailed discussion of the industry-based definition used in this report, including a complete listing of the industries included in BC Stats' high technology definition, see Appendix A, "Defining the High Technology Sector." Note that, due to confidentiality requirements, the industry detail available for reporting purposes is limited. For most of the data tables in this report, the manufacturing industries are not reported separately and service industries are grouped into the following categories: motion picture production and post-production, telecommunications, engineering services, software publishing, other computer and related services, and other services.

While an industry-based definition makes sense when examining high technology GDP or employment, it is not really appropriate for looking at trends in high tech commodity exports and imports. For this purpose, a second, commodity-based definition was developed. This definition was constructed using harmonized system codes, which are the commodity classification codes used in Canadian customs documents. The list of commodities classified as high technology products was based on the U.S. Bureau of the Census' advanced technology products (ATP) list, which is a recognized definition of high technology goods. Since Canadian and American commodity codes are identical only at the six-digit level and Canadian export codes are eight digits and import codes are ten digits, it was necessary to do some conversion. As a result, the final definition may not be identical to that used in the United States; however, it is reasonably similar and allows for broad comparisons.

For more detail on the commodity-based definition used in this report and a brief description of the ATP categories, see Appendix B, "Defining High Technology Commodities."

**New to this year's edition**

This report includes the latest information available as of December 2010. All data in this paper refer to the calendar year 2009. It should be noted that data revisions may result in differences between this and earlier editions of this publication. Statistics Canada has made some significant revisions to data from the Survey of Employment, Payrolls and Hours (SEPH), which underlies the estimates of high tech employment and wages and salaries in particular, but also the revenue and GDP figures. As a result of these changes, combined with some methodological

[1] NAICS is a system of classifying industries developed in cooperation between Statistics Canada, the United States Office of Management and Budget and the Instituto Nacional de Estadística, Geografía e Informática of Mexico.

improvements, the revisions in this edition of the *Profile* may be larger than those in past editions.

There are five provinces that have been designated as having a substantial presence in the high technology sector and are referred to throughout the text as the "designated provinces." With this edition, the province of Manitoba has been added to the list that previously included only British Columbia, Alberta, Ontario and Quebec. Accordingly, data for Manitoba has been included in those tables that provide detail by province. Manitoba has developed a world class aerospace industry and, in 2009, high tech exports from Manitoba exceeded those from Alberta, warranting Manitoba's inclusion in the list of designated provinces.

A new table comparing business counts by industry for each of the designated provinces has also been added.

Readers should note that graphs and text in this publication deal only with the highlights of the information that has been collected. The data tables preceding the appendices contain additional detail that can prove valuable.

**Input Indicators of the British Columbia High Technology Sector**

This *Profile* report provides an overview of the outputs of the high technology sector in British Columbia; however, it is also useful to look at the inputs to the high technology sector. To this end, BC Stats produces a companion report: *Input Indicators of the British Columbia High Technology Sector*. The *Indicators* report provides measures of the inputs to the high technology sector and the overall climate of innovation in British Columbia. It covers a variety of activities with respect to high technology in the educational, business, government, external and labour sectors. Whenever possible, the indicators are presented in comparison to other provinces, which serve as benchmarks for the situation in British Columbia.



# Profile and Trends

**B.C.'s high technology sector took a step back in 2009**

**In 2009, the global economic downturn had a dampening effect on British Columbia's economy as a whole and the high technology sector did not escape unscathed. While the negative impact of the downturn was slightly greater on output in the high tech sector compared to the overall B.C. economy, for other measures, such as exports and employment, the high tech sector actually fared better than the economy as a whole.**

## Gross Domestic Product

### High tech sector GDP dropped in 2009

In 2009, British Columbia's high technology real gross domestic product (GDP) fell 2.1% to $9.3 billion.[2] The high tech manufacturing sector was hit hardest by the global economic downturn, with GDP slumping 9.6%, but the high tech service sector also saw a decline in GDP, albeit a more modest 1.2%.

Among the service sector industries, engineering fared the worst, with GDP falling 7.3%. The combined industry group of telecommunications, motion picture production and post-production bucked the trend, experiencing 2.0% growth.

For the most part, 2009 represents an anomaly in terms of GDP growth in that British Columbia's high technology sector has typically outperformed the economy as a whole over the last decade. The only exceptions occurred in 2001, when high tech was suffering the effects of the dot.com crash, and in 2004, when growth in high tech GDP was marginally lower than that of the economy overall. It is possible that the lessons learned from the dot.com crash have better prepared high tech companies to recover from the more recent economic downturn. If so, B.C.'s high tech sector may soon return to above average GDP growth.

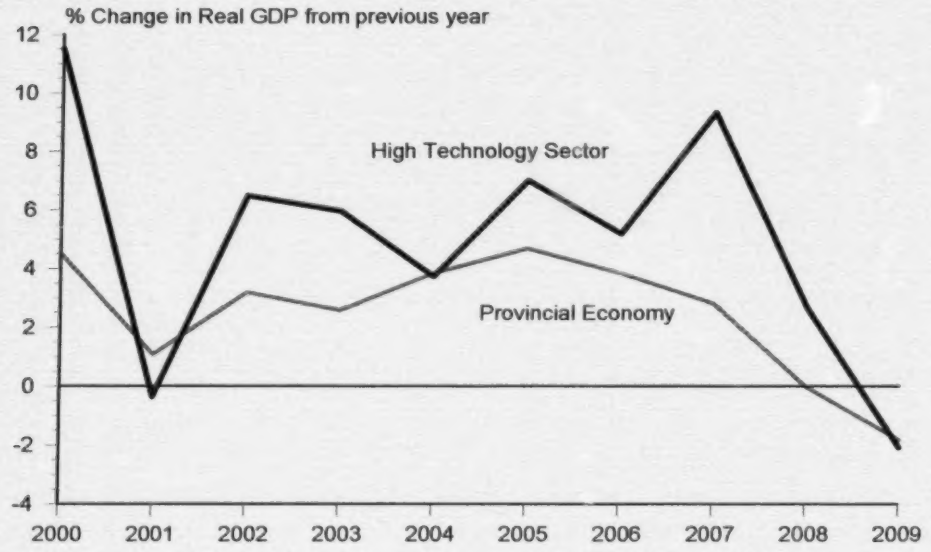
Although the high tech sector in B.C. is still relatively small, it plays a significant role in B.C.'s economy. In 2009, high tech generated approximately 5.9% of the province's GDP, putting it in the same ballpark as industries such as transportation and warehousing, and public administration.[3] In comparison, B.C.'s forest

[2] All GDP figures quoted in this paper are in chained 2002 constant dollars unless otherwise stated.

[3] This percentage is calculated using current dollar GDP estimates, since the constant dollar value of the B.C. industrial aggregate is chained and chained data is not additive; therefore, the percentage cannot be properly calculated.

Figure 1

**Real GDP Growth for High Technology and Overall Economy, British Columbia**




**In most years, B.C.'s high tech sector has outperformed the overall economy, but 2009 proved an exception**

sector (wood, pulp and paper production, logging and silviculture) produced just over 4% of total GDP. The finance, insurance and real estate and leasing sector (including owner-occupied dwellings) generates the greatest contribution, at approximately 22% of GDP.

### Services constitute the bulk of high tech GDP in B.C.

In 2009, B.C.'s high tech service sector industries generated about $8.3 billion in output, or about 89% of the province's high tech GDP. This compares to only $1.0 billion derived from B.C.'s high tech manufacturing industries.

| **B.C. GDP, 2009** (chained 2002 dollars) | | |
|---|---|---|
| | $million | % change 2008/2009 |
| Manufacturing | 1,036 | -9.6 |
| Services | 8,323 | -1.2 |
| **High Tech Total** | **9,345** | **-2.1** |
| **B.C. Total** | **148,082** | **-1.8** |

While it is useful to examine the high technology industry's performance relative to other industries in British Columbia and to look at trends comparing the industry's performance today to what it was a year ago or a decade earlier, one cannot really judge the size and scope of B.C.'s high tech sector without comparing it to high tech sectors in other jurisdictions.

In Canada, there are five provinces that, based on economic measures, have significant high technology sectors: Ontario, Quebec, British Columbia, Alberta and Manitoba. For each of the high technology indicators measured in this report, British Columbia ranks either third or fourth among these provinces.

### B.C. ranks fourth in the country in high technology GDP

The bulk of Canada's high technology sector resides in central Canada. Ontario's high tech sector generated $37.4 billion in GDP in 2009, accounting for 40% of the Canadian total. Quebec ranked second with $21.5 billion in high tech GDP, followed by Alberta with $10.4 billion. The $9.3 billion in GDP generated by B.C.'s high tech sector ranked fourth in the country. The output from B.C.'s high tech sector comprised around 10% of total Canadian high tech GDP in 2009, a share that has not changed substantially over the last decade.

In 2009, roughly three-quarters of the Canadian high tech sector's GDP was generated by the service sector.

Among the designated provinces, Quebec had the lowest share of high tech GDP generated by the service sector, at 68%. The large aerospace industry and significant production of pharmaceuticals are the main reasons that manufacturing makes up a larger portion of the high tech sector in Quebec than in the rest of the country. Alberta's service sector was responsible for 95% of the province's high tech GDP, the highest ratio among the designated provinces. In Ontario, the service sector accounted for 76% of the high tech output, compared to 74% in Manitoba and 89% in British Columbia.

Growth rates for high tech sector GDP varied across the country in 2009. Nationally, high tech GDP edged up 1.6%, but most of that growth was in the non-designated provinces. All the Canadian growth was concentrated in the service sector, as the goods sector saw GDP slip 2.7%. A significant increase in output from the telecommunications industry helped drive much of the 4.3% increase in Canada's high tech service sector GDP.

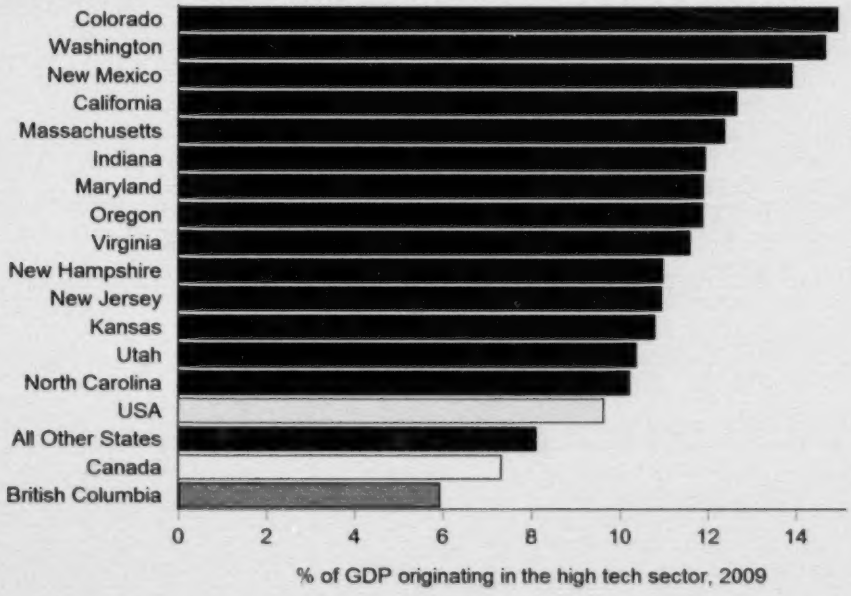
Of the designated provinces, only Manitoba experienced an increase in high tech GDP, with growth of 6.2%. Alberta's high tech sector suffered the worst performance among the designated provinces in 2009, with a 4.9% drop in GDP. Alberta's high tech goods sector was particularly hard hit by the economic downturn, with high tech manufacturing GDP slumping 16.2%; however, there was also a significant 3.0% decline in Alberta's high tech services GDP. British Columbia's 2.1% drop in GDP was the second worst among the designated provinces, although Quebec was only marginally better with a 2.0% decline. Ontario fared somewhat better, as high tech GDP in that province inched down only 0.6%.

### High technology plays a far bigger role in the United States

High technology has a far more significant presence in the United States economy than it does in Canada. Almost 10% of the United States' GDP was generated by the high tech sector in 2009, or nearly $1.6 trillion.[4] By comparison, high tech comprised only 7% of Canada's GDP and Canadian high tech output was around 7% of the U.S. total.

[4] All dollar figures for the United States have been restated in Canadian currency to allow direct comparison with Canadian figures. An annual average of the Canada/U.S. exchange rate was used to perform this conversion. All GDP figures for the U.S. are in current dollars and comparisons with Canada and the provinces are made using current dollar figures.

**Figure 2**
**High Technology GDP by State, 2009**




**High technology industries play a significant role in the economies of many U.S. states**

In 2009, the states where the high technology sector had the largest contribution to GDP were Colorado, Washington and New Mexico. Almost 15% of Colorado's GDP was produced by high technology industries. The state is home to a large telecommunications hub and has significant computer services and computer manufacturing industries. High technology industries were responsible for just under 15% of Washington State's GDP. Washington has substantial software and aerospace sectors, led by industry leaders Microsoft and Boeing, respectively. Nearly 14% of New Mexico's GDP was derived from high tech industries. The state has a strong research and development cluster, particularly in the biotechnology and information technology sectors, and also has a substantial computer and electronic manufacturing industry.

Prior to 2009, Oregon was the top state in terms of the share of GDP generated by the high technology sector, but the economic downturn hit the computer and electronic product manufacturing industry in that state quite hard, such that overall high technology GDP for Oregon plunged 31.3% between 2008 and 2009. This was by far the largest percentage decline for any state. As a result, high tech's share of the state's GDP dropped from 17% in 2008 to only 12% in 2009.

In terms of total value of output, California has by far the largest high tech sector in the United States, generating $273.0 billion in GDP in 2009, which represents almost 18% of the nation's total high tech GDP. High technology accounted for almost 13% of the state's GDP, driven by the computer industry in Silicon Valley, the large motion picture industry and a significant telecommunications presence. The value of GDP produced by California's high tech sector alone was almost three times that of all high tech output in Canada as a whole.

Overall, high technology plays a far more significant role in the economies of most American states than it does in Canadian provinces. In 2009, there were more than 30 states where high tech contributed more as a proportion of GDP than in British Columbia. Even in Quebec, where high tech generated 8.8% of GDP in 2009, the province ranked below 17 states. In absolute terms, based on the value of output generated by the sector, more than half the states had larger high tech sectors than British Columbia in 2009. Even Ontario, with the largest high tech sector in Canada, trailed seven states in terms of the value of output in the high technology sector in 2009.

## Revenue

### High technology revenue fell in 2009

After seven consecutive years of increases, revenues in British Columbia's high technology sector fell 3.2% in 2009, to $18.9 billion.[5] The slump was particularly precipitous in the manufacturing sector, where revenues dropped 12.6%, but the service sector also saw a drop in revenues with a more modest decline of 1.6%.

Within the service sector, by far the largest decline was in the motion picture production and post-production industry, where revenues plunged 34.6%. This slump occurred mainly due to a decline in production of Canadian films and television programs, as foreign-produced projects actually experienced fairly robust growth.

The overall decline in revenue was tempered by growth in some industries, including the telecommunications industry, which brings in the most revenues of any high tech industry group in the province. Revenues for the telecommunications sector climbed 7.5% in 2009, largely due to growth in revenue from wireless carriers and cable companies. Software publishing also saw strong growth, with revenues rising 4.1%, but other computer and related services experienced a 2.3% drop in revenues. Engineering services' revenues fell sharply, coming in 13.9% below revenues recorded a year earlier.

[5] Note that all revenue, wage and trade figures in this report are in current dollars as sufficient information is not available to calculate constant dollar figures. As such, growth rates include the effects of inflation.

**B.C. hit hardest among the designated provinces in 2009**

The 3.2% drop in revenues in British Columbia's high technology sector was by far the poorest performance of all the designated provinces. The only other designated province to experience a decline in revenues was Quebec, where high tech revenues dipped 1.5%. Ontario boosted its high tech revenue by 3.3% in 2009 and Alberta's revenues grew 2.0%. Manitoba posted the highest rate of growth in high tech revenues, at 5.0%, but that province's revenues are still only a fraction of those in the other designated provinces. For Canada as a whole, high tech revenues climbed 1.5%, well below the 4.9% growth in revenues in the United States.

**Over the last decade, B.C. has had some of the strongest revenue growth**

Despite the setback in 2009, B.C. has been among the top provincial performers in terms of revenue growth over the last decade. High tech revenues in B.C. rebounded quickly following the dot.com crash in 2001, significantly outpacing overall Canadian high tech revenue growth. Alberta and Manitoba experienced the strongest growth in high tech revenues across the designated provinces, while the more manufacturing-intensive central Canadian provinces of Ontario and Quebec trailed the national average in revenue growth over the last decade.

## Employment

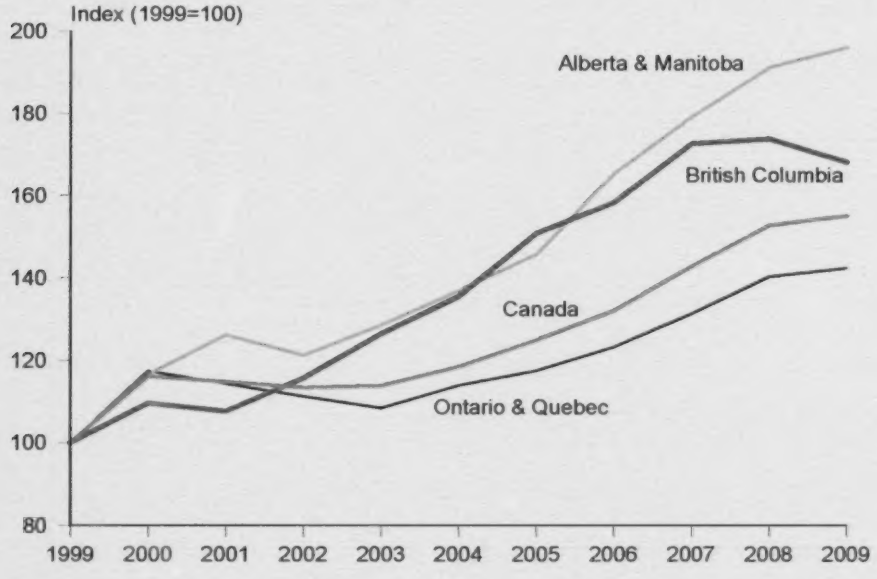
**Fewer people were employed by the high tech sector in B.C. in 2009**

Employment in British Columbia's high technology sector also declined in 2009.[6] High tech employment in the province dipped 2.2% in 2009, to 83,670. Most of the decline was in the manufacturing sector where the number of jobs fell 10.4%, but there were also 0.5% fewer jobs in the service sector. Despite the loss of jobs, the high tech sector still performed better than

[6] The measure of employment used in this report is based on Statistics Canada's Survey of Employment, Payroll and Hours (SEPH). This employer survey provides a wealth of detail about employment, wages and hours in a large number of industries. However, because it is an employer survey, the SEPH data do not include self-employed workers and workers in commercial fishing, agriculture and some services.

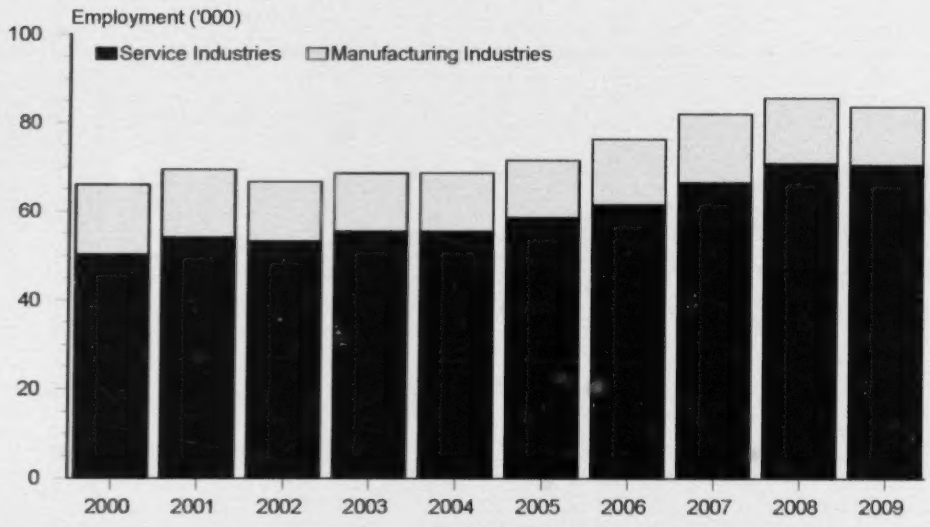
The data from SEPH give an average number of workers in an industry through the course of the year. If an industry is highly seasonal, the peak number of workers is offset by those months where there are fewer workers. A full-time worker is accorded equal status with a part-time worker. No attempt is made to measure the number of "person years" or "full-time equivalents."

Figure 3
**Index of High Tech Revenue Growth**




**Since the dot. com crash in 2001, B.C. has had fairly strong growth in high tech revenues**

Figure 4
**British Columbia High Technology Employment**




**High tech employment dropped in 2009**

the economy as a whole, as overall employment in B.C. fell 2.9% in 2009.

British Columbia's high technology sector has experienced labour shortages in recent years and, although the economic downturn temporarily rendered those problems moot, it is likely that the talent crunch will reemerge as the economy gets back up to speed. A tight labour climate could act as a constraint to growth in the high tech sector.

In addition to a tight supply of skilled labour, other barriers to hiring new staff include the high price of housing in the metro areas of the province, lower wages than many other regions and the small size of the sector relative to competing jurisdictions. On the positive side, B.C. offers many strengths, such as a competitive tax structure and quality of life advantages, including the province's natural beauty and the liveability of its cities. The development of a number of high tech clusters may also serve to attract highly skilled individuals to the province.

### Most of B.C.'s tech workers are employed in the service sector

Approximately 84% of workers in the high technology sector in British Columbia were employed in a service industry in 2009, up from 77% ten years earlier. The largest high tech service industry group, other computer and related services (excluding software publishing), employed more people than all high tech manufacturing industries combined. There were 13,210 high tech manufacturing employees in B.C. in 2009, compared to 18,450 workers in other computer and related services' jobs.

With the exception of telecommunications, all high tech service industries experienced job losses in 2009. Engineering services shed almost 1,300 jobs, a decline of 8.4%. The motion picture production and post-production industry had the largest percentage decline, at 11.0%. However, the telecommunications industry bucked the trend, adding almost 3,200 jobs, an increase of 36.0%.

**B.C. Employment, 2009**

| | Workers | % change 2008/2009 |
|---|---|---|
| Manufacturing | 13,210 | -10.4 |
| Services | 70,460 | -0.5 |
| **High Tech Total** | **83,670** | **-2.2** |
| **B.C. Total** | **1,888,500** | **-2.9** |

The 83,670 people working in high technology industries in B.C. in 2009 was almost double the total number of British Columbians directly employed by B.C.'s forest sector, which includes logging, silviculture, and wood and paper manufacturing industries (approximately 42,900 employees).

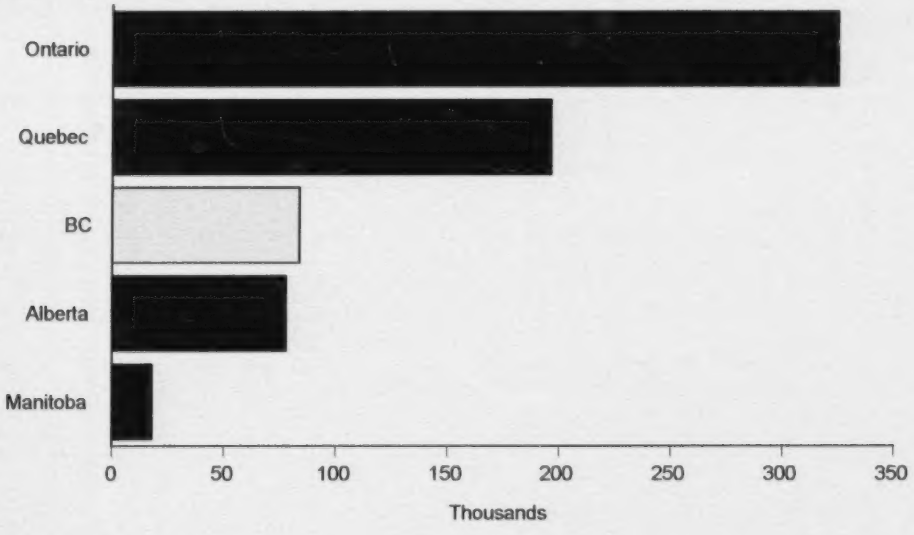
**B.C. has the third largest high tech workforce in Canada**

British Columbia's high technology employment ranks third in the country. With 324,620 high tech workers, Ontario leads the way. Approximately 43% of Canada's high tech workers reside in Ontario. Quebec has just over a quarter (26%) of the country's high tech employees, more than B.C. (11%), Alberta (10%) and Manitoba (2%) combined.

Despite a loss of high tech workers in 2009, B.C. fared reasonably well relative to most other designated provinces. The 2.2% drop in high tech employment in B.C. was slightly better than the 2.4% rate for Canada as a whole. Among the designated provinces, only Ontario recorded a lower rate of decline, with high tech employment in that province edging down only 0.2%. Alberta saw the sharpest drop in high tech employment, at 7.4%, while Quebec lost the greatest number of actual jobs, shedding almost 10,000 high tech employees between 2008 and 2009, a decline of 4.8%. Manitoba lost 4.2% of its high tech employment.

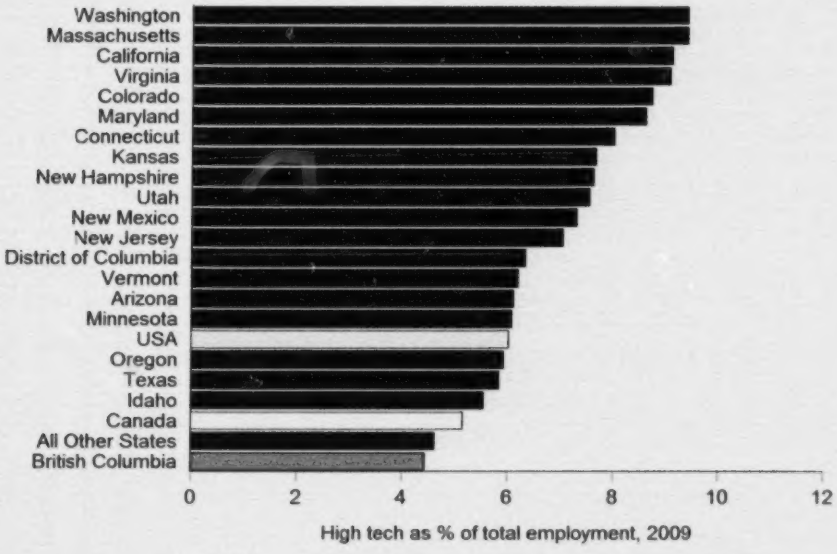
Overall, the high technology sector employed approximately 4.4% of British Columbia's work force in 2009, placing B.C. fourth among the designated provinces. Only Manitoba, at 3.2%, has a lower share of its workers in the high tech sector. Quebec, at 5.9%, has the largest share of its workforce in the high tech sector, followed by Ontario (5.8%) and Alberta (4.5%). The high tech sector employs approximately 5.1% of all workers in Canada.

Figure 5
**High Technology Employment by Province, 2009**




**B.C. ranked third in high tech employment in Canada in 2009**

Figure 6
**High Technology as a Percent of Total Employment, 2009**




**Washington State has the largest share of employment comprised of high technology workers**

### A greater percentage of Americans are employed in high tech industries

Compared to Canada, the United States has a slightly greater proportion of its workforce employed by high technology industries.[7] In 2009, 6.0% of American employees worked in high technology industries. Comparing across states, high technology's share of total employment ranged from a high of 10.1% in Washington State to a low of 2.6% in Wyoming. Other states where the high technology sector is a prominent employer include Massachusetts (9.6%), California (9.1%), Virginia (9.1%), Colorado (8.7%) and Maryland (8.6 %).

A total of 32 states ranked ahead of British Columbia in terms of the sector's importance as an employer.[8] Even Quebec, at 5.9% of employment generated by high technology, the highest rate in Canada, ranked behind Oregon, which placed 17th in the United States.

In 2009, just over 7.7 million people were employed in the high technology sector in the United States, down 4.3% from a year earlier. Of these, around 17%, or 1.3 million workers, resided in California. In that state, computer manufacturers and companies providing computer systems design services employed more than a third (36%) of high tech workers. Telecommunications firms, the motion picture industry and engineering companies were also major high tech employers in California. California's high tech employment was more than double that of second-ranked Texas, which had just under 0.6 million employees in the sector.

Compared to Canada, manufacturing plays a far more significant role in high technology sector employment in the United States. In 2009, almost a third (32%) of all high tech jobs in the United States were in manufacturing industries, compared to only 26% for Canada and just 16% in British Columbia. Given that businesses in manufacturing industries tend to have more staff on the payroll than those in the service sector, this could explain why high tech workers comprise a larger share of the total employed workforce in the U.S. than in Canada.

[7] Similar to the Canadian numbers, the employment data used in this report comes from an employer survey (*Quarterly Census of Employment and Wages*), so self-employed workers are excluded.

[8] For ease of reporting, the District of Columbia is counted as a state.

In 2009, there were six states where manufacturing industries employed at least half of the state's high tech workforce, topped by Indiana at 54%. At the other end of the scale, high technology employment in the District of Columbia, Alaska and Hawaii was almost all in the service sector, with 3% or less of high tech workers in those states employed in manufacturing industries.

## Wages and Salaries

### High tech wages and salaries hit new heights in 2009

Despite the economic downturn and the drop in high tech employment, aggregate wages and salaries in British Columbia's high tech sector continued to rise in 2009.[9] There was growth of 1.4% in total high tech wages and salaries, to more than $5.3 billion, the highest level ever recorded. This compares favourably to a 2.1% drop in wages and salaries across all industries in British Columbia. The wage growth for the high tech sector as a whole occurred despite a substantial 8.7% drop in remuneration for workers in high tech manufacturing industries, as the payroll in high tech services climbed 3.3%. The decline in wages and salaries in the manufacturing sector was the result of the 10.4% drop in manufacturing employment.

The jump in total high tech wages and salaries in B.C., despite a drop in employment levels, was possible due to a 3.7% increase in the average weekly earnings of high tech workers in the province. Both the high tech manufacturing and service sectors experienced wage inflation in 2009. Workers in high tech service industries saw their average weekly earnings climb 3.8% in 2009, while manufacturing employees earned 1.9% more than they did a year earlier. Growth in earnings of high tech workers was far stronger than the general pay increase across B.C., which edged up only 0.8%.

[9] Wages and salaries are based on the earnings of all workers in an industry who are on the payroll, from working owners and senior executives to junior support staff. While overtime and bonus pay are included, other benefits such as medical plans, stock options and time off in lieu of overtime are not. Like the employment values described earlier in this report, the wages and salaries data are calculated using source data from Statistics Canada's Survey of Employment, Payroll and Hours.

Within the service sector industries, the motion picture production and post-production industry bucked the trend, shaving 32.3% off the average weekly earnings of its employees, which could be linked to the departure of 750 employees from the industry in 2009. The largest increase in compensation in the high tech sector was in the telecommunications industry, at 16.3%, followed by software publishing, at 9.9%.

### Workers in B.C.'s high tech sector earn significantly more than the provincial average

On average, workers in B.C.'s high technology sector earn far more than the average employee in the province. High tech workers earned an average of $1,220 per week, compared to just $800 for the average B.C. worker. The largest variation between high tech wages and overall earnings was in the service sector, where the average weekly wage was $1,260 in high tech industries compared to only $760 for the average worker in the service sector as a whole. The difference in pay was far smaller in the goods sector. In 2009, high tech manufacturing employees earned an average of $1,060 per week compared to $990 for the goods sector overall.

The disparity in wages for high tech workers and those in other industries is likely due to a combination of greater skill requirements relative to many jobs, as well as a strong demand for skilled high technology workers, therefore requiring greater pay to both attract and retain them.

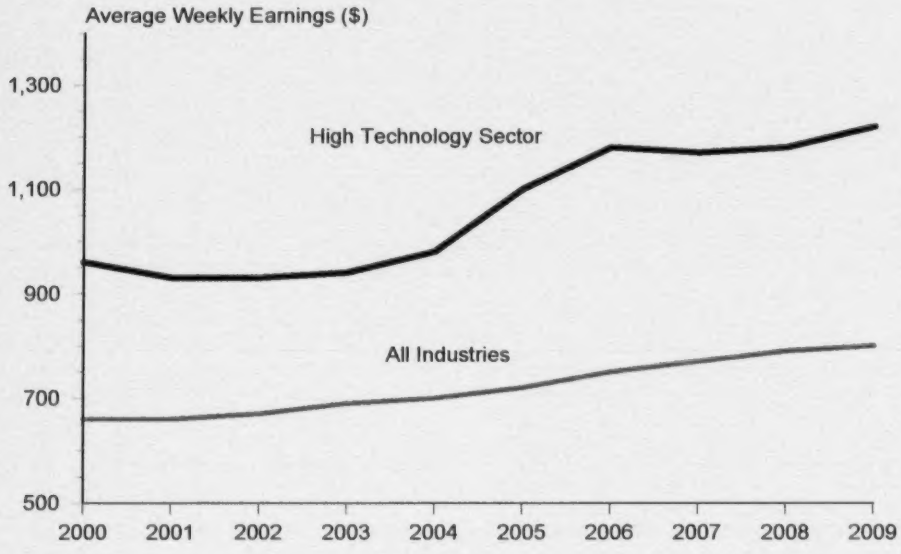
As the economic recovery strengthens and the supply of skilled labour tightens once again, high tech employers in B.C. and elsewhere will likely have to enhance their wage and benefit packages even further in order to attract qualified employees from other jurisdictions or to encourage more young people to pursue training in relevant areas.

### Earnings of high tech workers in B.C. slightly below the national average

In 2009, the compensation package offered by high tech employers in B.C. was slightly below the national average. B.C.'s average weekly earnings of $1,220 for a high tech worker trailed the Canadian average of

Figure 7

**Average Earnings in the High Technology Sector Compared with All Industries, British Columbia**



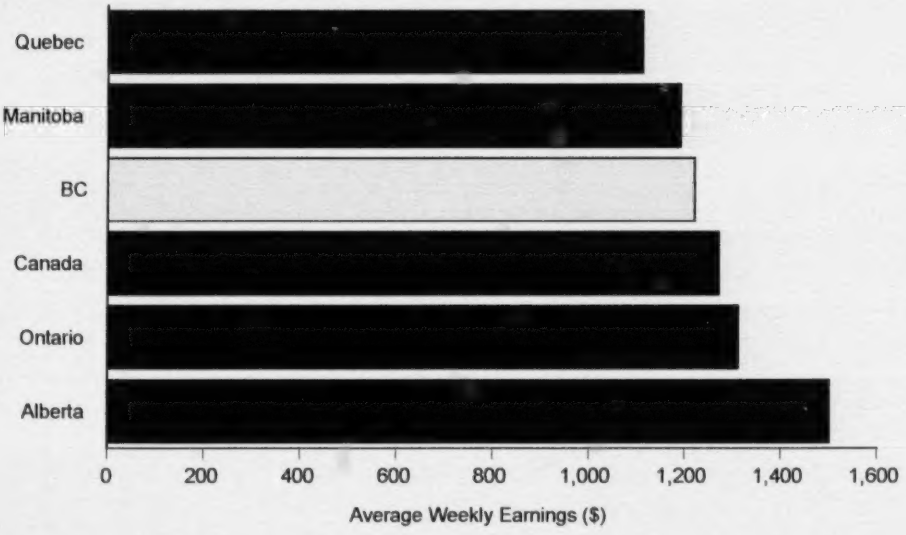

**Wages in high technology industries are far higher than the average for all industries in the province**

$1,270. Alberta's high tech companies offered the highest average wage, at $1,500 per week. The pay was particularly lucrative for Alberta's engineers and for employees in the computer systems design and related services industry. The average high tech worker in Ontario also earned more than their counterpart in B.C., at $1,310 per week.

All the designated provinces experienced wage inflation in the high technology sector in 2009, led

Figure 8

**Average Earnings in the High Tech Sector by Province, 2009**




**B.C. high technology average earnings trailed the national average in 2009**

by Manitoba, which recorded a 5.8% increase in average weekly earnings. For Canada as a whole, earnings of high tech workers jumped 3.2%. Only Ontario experienced growth below the national average, with 2.5% growth in average weekly pay. British Columbia's 3.7% increase exceeded the Canadian average, but trailed the 4.6% jump in Quebec and the 4.0% growth in Alberta.

Compared to the high tech sector in the United States, wages in Canada are relatively low. In 2009, the average weekly wage for high tech workers in the United States was about $1,808, ranging from $1,105 in South Dakota to $2,185 in California. British Columbia's high tech workers were paid much less than their counterparts in most U.S. states. Given this disparity, one can see why high tech companies in British Columbia may have trouble recruiting skilled employees during periods when the labour market is tight. A large part of the problem is that most of the high tech companies in B.C. are small and likely cannot afford to pay as much as larger businesses in the United States, or even in Ontario.

## Business Counts

### Number of high tech businesses in B.C. rises in 2009

Despite the economic downturn, the number of high technology businesses in British Columbia continued to climb in 2009.[10]

There were a total of 8,903 high tech businesses with employees in 2009, representing a marginal 0.8% increase over 2008.[11] This lacklustre growth was similar to that of total business counts across all industries, which edged up only 0.6% in the face of the global downturn.

In examining the counts by size of business, it is apparent that the slight growth in the number of high tech businesses was due to an increase in businesses with fewer than ten employees. The count of businesses with ten employees or more fell, which could indicate that some larger businesses shed employees and became smaller businesses. Given that, despite the small increase in businesses, high tech employment in the province fell, such a scenario seems likely.

The growth in number of businesses was confined to the service sector, as the number of high tech manufacturing businesses in the province actually fell 2.7%, or 21 fewer businesses in 2009 than a year earlier. A number of factors were likely responsible for the decline, including a relatively high Canadian dollar compared to its U.S. counterpart and reduced demand due to the economic downturn.

### Most of B.C.'s high tech businesses are in the service sector

British Columbia's high technology sector is dominated by firms operating in the service sector, which accounts for 92% of all high tech businesses in the province. In 2009, of high technology businesses with employees, 8,152 were in service industries and 751 were manufacturers.

Within British Columbia's high technology sector, computer and related services comprise the largest industry group, with 37% of the province's high tech businesses. "Other services" (23%) and engineering services (20%) are the next two largest high tech industry groups. Environmental and technical consulting industries are the largest component of the "other services" industry group, accounting for more than half of the businesses in that category.

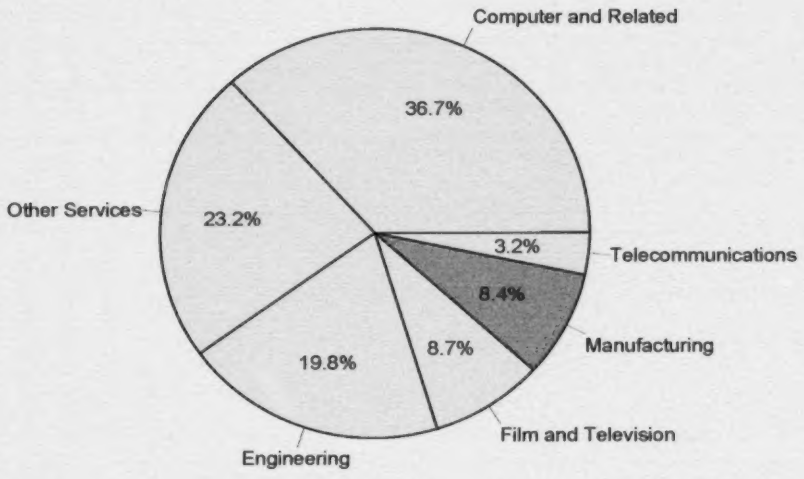
[10] Statistics Canada has changed the method used to measure business counts such that data reported here are inconsistent with figures reported in earlier editions of this publication. Previously, the measure used was the concept of a statistical establishment, defined as a production entity that produces a homogeneous set of goods or services, does not cross provincial boundaries, and provides data on the value of output together with the cost of principal intermediate inputs and labour resources used to produce the output.

With the release of the 2008 data, the concept of a statistical location was introduced. A statistical location is defined as a producing unit at a single geographic location at which, or from which, economic activity is conducted and for which, at minimum, employment data are available. The change to business location counts was made because they provide a better measurement of actual business units. One consequence of this change is that location data prior to 2007 are not available.

[11] Owner-operated firms with no paid employees are not included in the tabulation of business counts.

Figure 9

***Distribution of B.C.'s High Tech Businesses, 2009***




**Service sector businesses dominate B.C.'s high tech sector**

### High tech manufacturing firms employ more people

On average, businesses in the service sector tend to employ fewer people than those in manufacturing industries. Of businesses with employees, 9% of high tech manufacturers employed more than 50 workers, compared to less than 4% of high tech service businesses. While less than half (46%) of high tech manufacturers have between one and four employees, 71% of the businesses in the service sector fit this description.

### High tech businesses are located where the people are

High technology businesses are most often located in the areas of the province that are most densely populated. In 2009, more than two-thirds (68%) of British Columbia's high technology businesses were located in the Mainland/Southwest Development Region, with the bulk residing in Greater Vancouver. Vancouver Island/Coast was home to 17% of the province's high tech businesses, with the majority of these located in the Capital region, and Thompson-Okanagan was home to 8% of high tech businesses in British Columbia.

The Mainland/Southwest region is home to the head offices of the largest tech companies in the province, including Telus; MacDonald, Dettwiler and Associates; and Sierra Wireless just to name a few. There are a number of high tech clusters either already established or beginning to develop in the Greater Vancouver region, including alternative energy companies such as Ballard Power Systems and Westport Innovations Incorporated; digital media and gaming developers such as Electronic Arts, United Front Games and Radical Entertainment; biotechnology firms such as Angiotech Pharmaceuticals and StemCell Technologies; and a burgeoning wireless sector. There was very little growth in the number of high tech businesses in Mainland/Southwest in 2009, with a net addition of only ten companies, which translates to an anaemic 0.2% growth.

The Vancouver Island/Coast region has a strong information technology sector that provides software

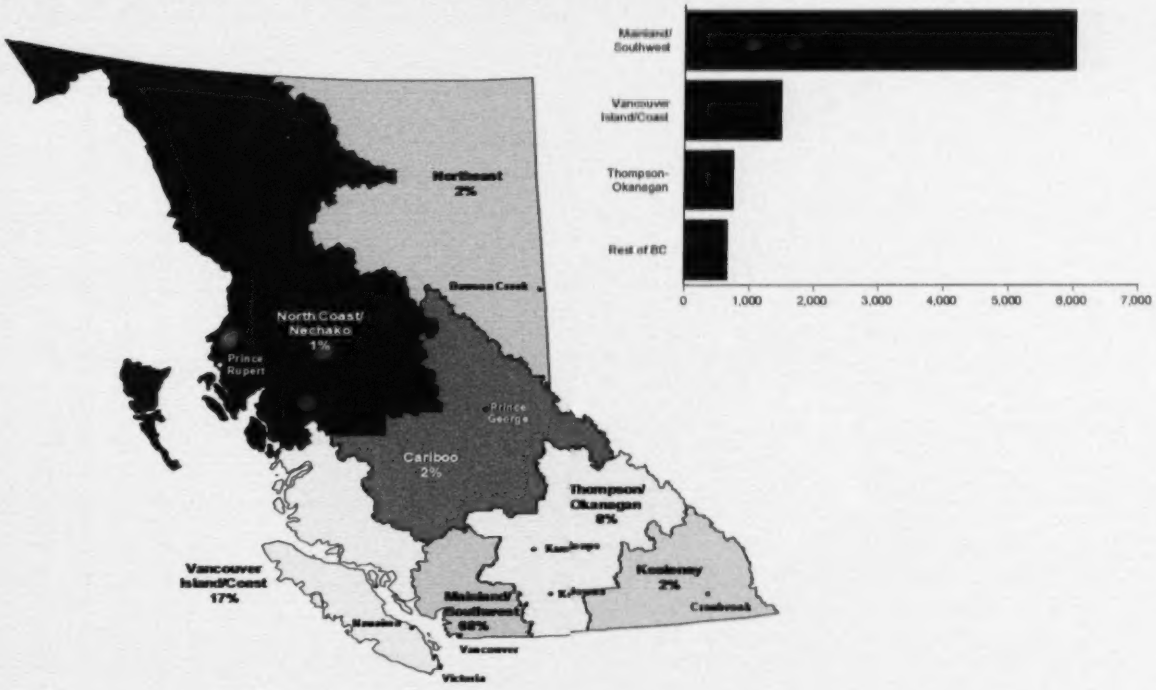
and web development, and also has a significant presence in the environmental technology industry. The majority of the region's high tech companies are situated in Greater Victoria, which is the head office location of some of the province's larger high technology companies, including broadband hardware manufacturer Vecima Networks Incorporated and Carmanah Technologies Corporation, a manufacturer of solar powered systems and equipment. High tech businesses are also prevalent in areas outside the Capital region, particularly in the Nanaimo and Comox-Strathcona regions. The number of high tech businesses in Vancouver Island/Coast continued to grow in 2009, increasing by 1.8%, or 26 net new firms.

The Thompson-Okanagan region has a variety of high tech companies, with significant concentrations in software development and data storage. In 2008, IBM identified Kelowna as a perfect location in which to build a data storage centre and already a new "GigaCenter" has been built in the city by RackForce Networks Incorporated. In addition to the new data storage centre, the Thompson-Okanagan region added a number of other high tech businesses in 2009. Overall, the region added 29 net new high tech businesses, which translates to growth of 4.0%.

In the remainder of the province, there are a variety of high technology businesses, ranging from telecommunications to environmental technologies, but software, web design and hosting are the most common. The Northeast region experienced the highest percentage growth in the number of high technology firms in 2009, at 6.8%, while there were 5.2% fewer high tech businesses in the Cariboo region. The Kootenay region added a handful of net new high

## Figure 10

**Distribution of High Technology Businesses by Region, 2009**



tech companies in 2009, achieving a growth rate of 2.6%, while the North Coast/Nechako area saw no change in the number of high tech firms.

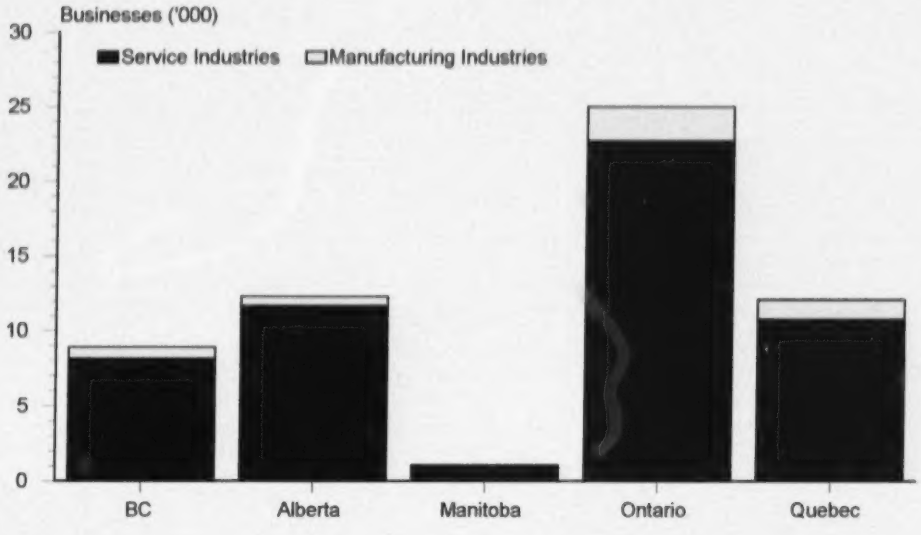
**Provincial variance in business counts**

There is some interesting provincial variation with respect to business counts. For example, despite having more than double the number of high tech employees working in the province, Quebec has fewer high tech businesses than Alberta, as does B.C., despite having more high tech workers than Alberta. Similarly, Manitoba has fewer high tech businesses than the other designated provinces, even after employment differences are taken into account. Business size is the explanation for this apparent contradiction, as both Quebec and Manitoba have proportionately fewer small firms and more very large companies.

There are also some significant differences in the distribution of businesses among industries. In Ontario, more than half of all high tech firms are in the computer and related services sector, compared to just over one quarter of high tech businesses in Alberta. Manitoba has the highest percentage of companies in the manufacturing sector, at 13%, while Alberta has the most high tech service sector industries, at 95%.

Figure 11

**Counts of High Technology Businesses by Province, 2009**




**In each province, the high tech sector is dominated by service industries**

## Self-Employment

### Self-employment in the high tech sector

Some high technology industries are ideally suited to self-employment,[12] where the skills, knowledge and energy of the individual are more important than large capital investment. The available data appears to confirm this, as more than two-thirds (68%) of businesses in B.C.'s high technology sector had no paid employees in 2009. As one would expect, businesses involved in manufacturing are far less likely to be composed of self-employed individuals with no employees. Only 44% of all high tech manufacturers had no employees, compared to 69% of high tech service businesses.

| Business Counts, 2009 | | |
|---|---|---|
| | Without Employees | With Employees |
| Manufacturing | 583 | 751 |
| Services | 18,170 | 8,152 |
| **High Tech Total** | **18,753** | **8,903** |
| **B.C. Total** | **186,541** | **176,124** |

The proportion of high tech businesses in B.C. with no employees is significantly higher than in other sectors. In 2009, only 51% of all businesses in the province had no employees.

There is evidence to suggest that many high technology businesses that start out as lone operators with no employees may eventually grow into companies with full-time employees. The British Columbia Technology Industry Association surveyed technology companies across the province and, of those businesses composed solely of a lone operator, about a third stated that they intended to hire full-time employees at some point in the next two years.[13]

Given the small sample size, these results should be considered anecdotal evidence; nevertheless, it does offer some insight into how some high tech firms develop.

## Commodity Exports and Imports

### International trade in high tech goods

International trade is an important aspect of the high technology sector, as reflected in the high volume of two-way trade. The domestic market for high technology goods[14] generally does not have sufficient volume to achieve the economies of scale needed to remain competitive; therefore, access to international markets is extremely important as it allows B.C. producers of high tech goods to focus on market niches. At the same time, B.C. manufacturers do not produce enough of some types of high technology equipment to satisfy the domestic demand from either consumers or the high tech industry itself, and as a result, large volumes of goods are imported into the province.

### High tech goods exports fell in 2009

The value of British Columbia high technology goods exports dropped 12.5% in 2009, to $865.2 million. The decline was likely the result of the global economic downturn, which dampened demand for goods of any description, including high technology products. The slump in high tech exports was the largest one-year drop since the dot.com crash in 2001. Nevertheless, B.C.'s high tech sector exports fared far better than B.C.'s overall goods exports, which dropped 24.3%. As a result, the proportion of B.C.'s overall exports comprised of high technology goods climbed to 3.4%, the highest share ever recorded.

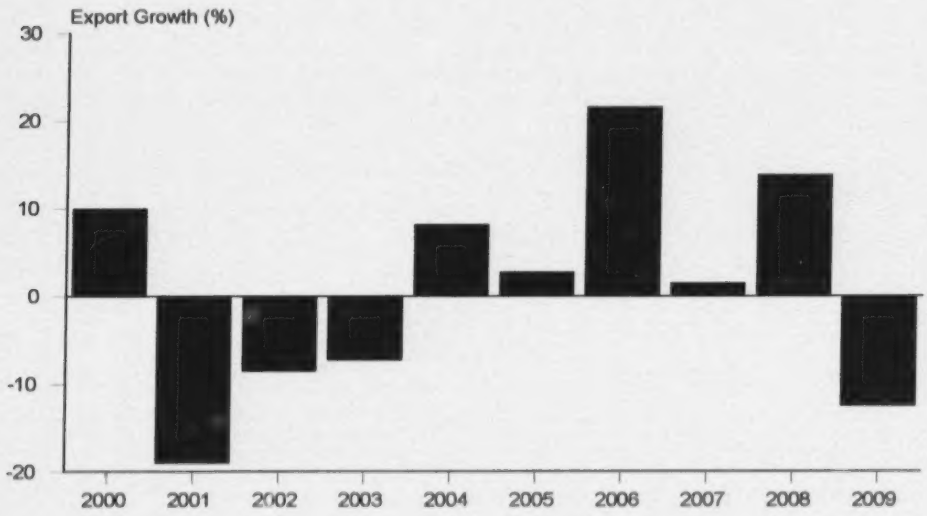
[12] There is currently no perfect measure available of self-employment in the high tech sector. The figures quoted here are based on a tabulation of the number of establishments with no employee payroll. This approximates the number of self-employed with no employees (those with employees will be counted in the number of businesses discussed earlier). This is only an approximation because the figure may also include companies that hire only contractors, or companies with unpaid family workers. *Note that it would be erroneous to add these counts of self-employed to the total number of high technology workers reported elsewhere in this report due to the differences in what is being measured.*

[13] TechTalentBC. (February 2010). *Labour Trends in the British Columbia Technology Sector*. British Columbia Technology Industry Association.

[14] High technology goods referred to in this document are based on a list developed by the U.S. Bureau of the Census and modified to fit Canadian conditions. See Appendix B, "Defining High Technology Commodities" for more information.

Figure 12

**Growth in British Columbia High Technology Goods Exports**

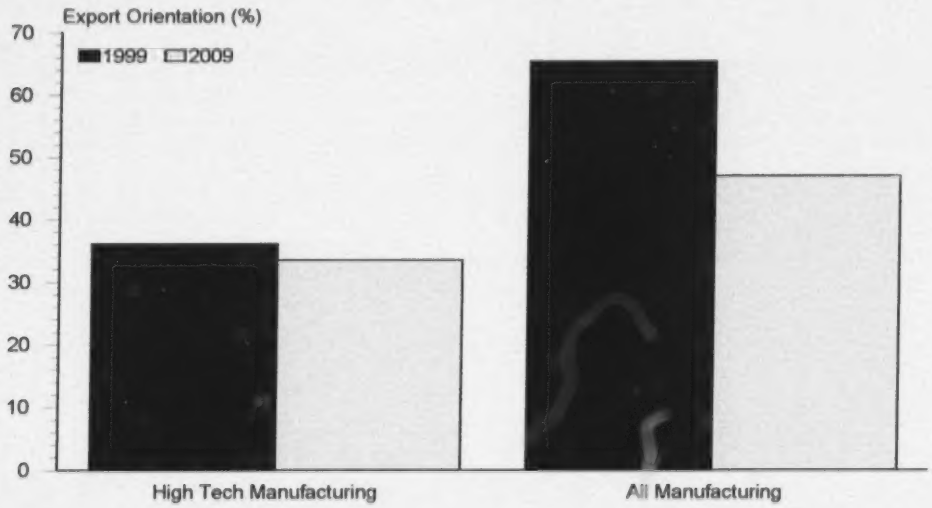



**In 2009, B.C.'s high tech exports recorded their largest decline since the dot. com crash**

Exports are an important source of revenue for B.C.'s high tech sector; however, the province's high technology manufacturing industries tend to be geared more toward the Canadian market, particularly compared to manufacturing in the province in general. In 2009, just 33% of total high tech goods manufactured in B.C. were exported, compared to 47% for B.C.'s manufacturing sector overall. This gap has narrowed considerably over the last decade as the proportion of B.C.'s manufactured goods that are

Figure 13

**Share of British Columbia Production Exported Internationally**




**A smaller portion of high technology products are exported abroad compared to total manufacturing**

exported to international destinations has been falling, possibly as a result of an appreciating dollar that has made B.C. products more expensive to foreign buyers.

**Exports of high tech goods are concentrated in just a few commodity groups**

The bulk of B.C.'s high tech exports are concentrated in just a few commodity groups.[15] Computers and telecommunications equipment constitute the largest group of high technology goods exported from British Columbia. Almost half (46%) of the province's high tech exports are comprised of goods from this commodity group, with international shipments of computers and telecommunications equipment amounting to $401.0 million in 2009. This was down 3.7% from a year earlier, a drop of $15.4 million.

Aerospace products and life sciences goods together represented another third of B.C.'s high technology commodity exports. British Columbia exporters shipped $142.8 million worth of aerospace products and $141.2 million in life sciences goods to international destinations in 2009. This represented a 24.6% drop from 2008 for the aerospace commodities group and a 7.0% increase for life sciences products.

The largest decline in exports, both in value and percentage, was in shipments of opto-electronics, which slumped by $76.0 million, or 61.2%. This drop wiped out the 149.8% jump in exports from a year earlier, such that the value of exports of opto-electronics was only slightly lower than that recorded in 2007. A substantial increase in shipments of photosensitive semiconductor devices and/or light emitting diodes, mainly to Germany, was responsible for the one-year jump in exports of opto-electronics in 2008.

**B.C. high technology exports by commodity group – 2009**

| | $ millions | % change 2008/2009 |
|---|---|---|
| Computers and Telecommunications | 401.0 | -3.7 |
| Aerospace | 142.8 | -24.6 |
| Life Sciences | 141.2 | 7.0 |
| Computer Integrated Manufacturing | 89.8 | -18.2 |
| Opto-Electronics | 48.3 | -61.2 |
| Electronics | 34.7 | 192.0 |
| Biotechnology | 3.5 | 22.1 |
| Weapons and Nuclear | 2.7 | 473.1 |
| Material Design | 1.4 | -8.9 |
| **Total** | **865.2** | **-12.5** |

Exports of computer integrated manufacturing goods fell 18.2%, but shipments of electronics almost tripled in value. The rise in exports of electronics was due to a considerable jump in shipments of "smart cards" to the United States.

British Columbia generally does not export significant volumes of goods from the remaining commodity groups.

**The U.S. is the primary destination for B.C. high tech exports**

In 2009, the United States was the destination for approximately 67% of British Columbia's high technology commodity exports. B.C.'s high tech sector is proportionately more dependent on the U.S. market for export sales than are the province's exports overall. In 2009, only 51% of B.C.'s total goods exports were shipped to the United States. However, the ratio of high technology exports headed to the United States is still well down from its peak of 84% in 2000. Although the overall value of high technology goods shipped to the U.S. is also down from that peak year, mostly due to the bursting of the high tech bubble in 2001, most of the drop in share is due to diversification to other markets.

[15] For information on high technology commodity groups, see Appendix B.

| B.C. high technology exports by destination – 2009 | | |
|---|---|---|
| | $ millions | % change 2008/2009 |
| United States | 582.9 | -5.7 |
| European Union | 126.9 | -34.1 |
| Germany | 27.8 | -65.0 |
| Italy | 26.6 | 15.1 |
| United Kingdom | 21.1 | -26.2 |
| Pacific Rim | 86.8 | -14.1 |
| Australia | 16.6 | 25.5 |
| Hong Kong | 14.7 | 70.2 |
| Mainland China | 13.7 | -36.3 |
| Rest of the world | 68.6 | -10.6 |
| **Total** | **865.2** | **-12.5** |

Shipments to the European Union, in particular, have grown significantly over the last decade. The European Union received 7% of B.C.'s high tech exports in 2000, with that share climbing to 19% in 2008 before slipping back to 15% in 2009. Exports to Pacific Rim countries, which dropped to their lowest levels in the early part of the decade, have rebounded somewhat to roughly 10% of exports, but are still well below peak levels attained in the mid-nineties.

The value of high technology exports to B.C.'s largest market, the United States, fell 5.7% in 2009, less than half the rate of decline of high tech exports overall (-12.5%). Shipments of high tech products to the European Union plunged 34.1% in 2009, but the decline was largely the result of the return to normal in exports of opto-electronics to Germany after the temporary surge in 2008.

Shipments to the Pacific Rim slumped 14.1% in 2009, despite a 70.2% jump in exports to Hong Kong and a 25.5% growth in shipments to Australia. Those gains were more than offset by double-digit drops in high tech exports to Japan (-52.5%), Mainland China (-36.3%), South Korea (-38.5%) and Taiwan (-54.1%).

### Mode of transport of high tech goods depends on destination

The mode of transport of high technology goods exported from the province depends largely on the destination of those goods and, to a lesser extent, on the types of goods being shipped. In 2009, more than two-thirds (69%) of B.C.'s high tech goods shipped to the United States were transported over land by truck or rail, with the remainder shipped by airfreight. For all other countries, the bulk of goods were transported by airfreight (87%), with only 11% shipped by sea and 2% over land.[16]

| B.C. high technology exports by destination and mode of transport – 2009 | | | | |
|---|---|---|---|---|
| | Mode of Transport | $ millions | % of region | % of total high tech exports |
| United States | Land | 399.3 | 68.5 | 46.2 |
| | Sea | 0.0 | 0.0 | 0.0 |
| | Air | 183.6 | 31.5 | 21.2 |
| | **Total** | **582.9** | **100.0** | **67.4** |
| All other countries | Land | 4.9 | 1.7 | 0.6 |
| | Sea | 30.6 | 10.9 | 3.5 |
| | Air | 246.8 | 87.4 | 28.5 |
| | **Total** | **282.4** | **100.0** | **32.6** |
| Total | Land | 404.2 | 46.7 | 46.7 |
| | Sea | 30.6 | 3.5 | 3.5 |
| | Air | 430.4 | 49.7 | 49.7 |
| | **Total** | **865.2** | **100.0** | **100.0** |

There has been some variation in the mode of transport of B.C.'s high tech goods from year to year as a result of changes in both the types of goods shipped and the intended destination of those goods, but the mode used is generally split between shipping over land or by air. With the exception of 2008, when almost 10% of B.C.'s high tech exports were shipped by sea, only a small percentage (usually between 1% and 3%) of high tech goods travel by boat. In most

[16] Note that the shipments by land to destinations other than the United States are not all destined for Mexico. Goods destined for overseas destinations may leave B.C. by truck or rail to points of departure in the United States where they are loaded onto ships or planes for the remainder of their journey.

years, shipping over land by road or rail has been the mode of transport used most often, but in some years, including 2009, airfreight has been the more popular choice.

The fact that air transportation comprises such a large percentage likely speaks to the higher value and perhaps more fragile nature of high tech goods.

**B.C. ranks third in the country in terms of high tech exports**

The value of British Columbia's exports of high technology goods is relatively small compared to Canada's manufacturing hubs of Quebec and Ontario. Given the relative size of their economies, one would expect B.C. to lag behind these two provinces; however, even taking that into account, B.C.'s $0.9 billion in exports of high tech goods was still comparatively modest.

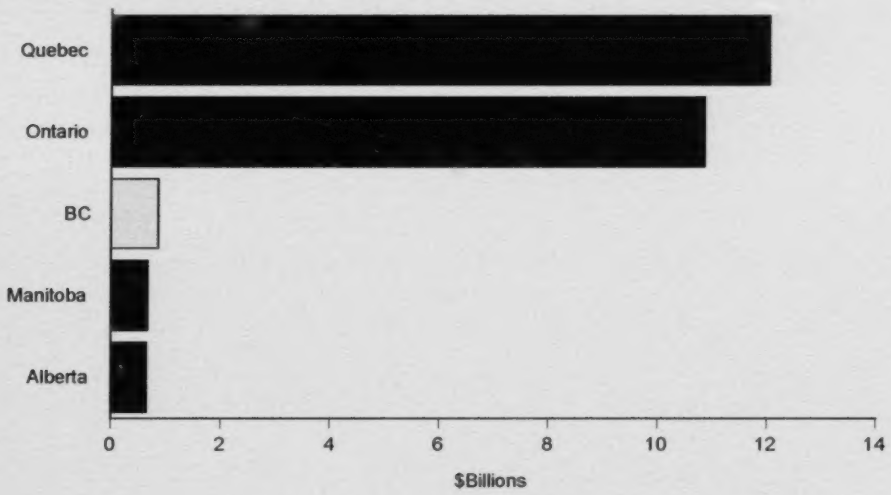
Among the Canadian provinces, Quebec was the top exporter of high technology merchandise, shipping approximately $12.0 billion worth of high tech goods in 2009. Quebec's world-class aerospace industry was the source of the bulk of these goods (76%). High technology products comprise a far greater share of Quebec's overall commodity exports compared to other provinces. In 2009, 21% of the province's goods exports consisted of high technology products, compared to less than 8% for Canada as a whole. The only other province to exceed the Canadian average was Ontario, at 9%.

Ontario ranked second behind Quebec in terms of high tech exports, shipping $10.9 billion worth of high tech goods in 2009. Combined, these two provinces were the source of 90% of Canada's high technology commodity exports.

In 2009, high tech goods made up just over 3% of B.C.'s overall commodity exports, but the $0.9 billion worth of goods shipped from the province was enough to rank B.C. third in the country. Prior to 2008, British Columbia had almost always trailed behind Alberta (with the exception of 1993), but three consecutive years of double-digit declines have seen Alberta's high tech exports almost halved. This allowed B.C. to leap ahead of Alberta in 2008 and retain its third place ranking in 2009. Alberta also slipped behind Manitoba, which increased its high tech exports by 21.4% in 2009, driven by a substantial rise in shipments of biotechnology and aerospace goods. Manitoba was the only one of the five designated provinces to experience growth in exports in 2009.

Figure 14

**Exports of High Technology Goods by Province, 2009**




**B.C.'s exports of high tech goods are relatively small**

Among the designated provinces, Alberta suffered the largest drop in value of high tech exports in 2009, slumping 25.7%, as shipments of opto-electronics and computers and telecommunications products were halved. British Columbia had the second largest decline, at 12.5%, followed by Quebec (-9.0%) and Ontario (-5.8%). For Canada as a whole, high technology exports fell 7.5%.

**Imports of high technology goods declined in 2009**

Similar to exports, the downturn in the economy also affected British Columbia's imports of high technology goods In 2009, which were valued at $4.4 billion. This value reflects a 10.9% drop over 2008 imports, the largest decline since at least 1990, the earliest year for which data are available.

In 2009, high tech imports from the United States fell 13.7% to their lowest level since 1993; however, the United States remained B.C.'s most significant source of imported high tech goods, despite the fact that imports from that country have declined in seven of the last ten years.

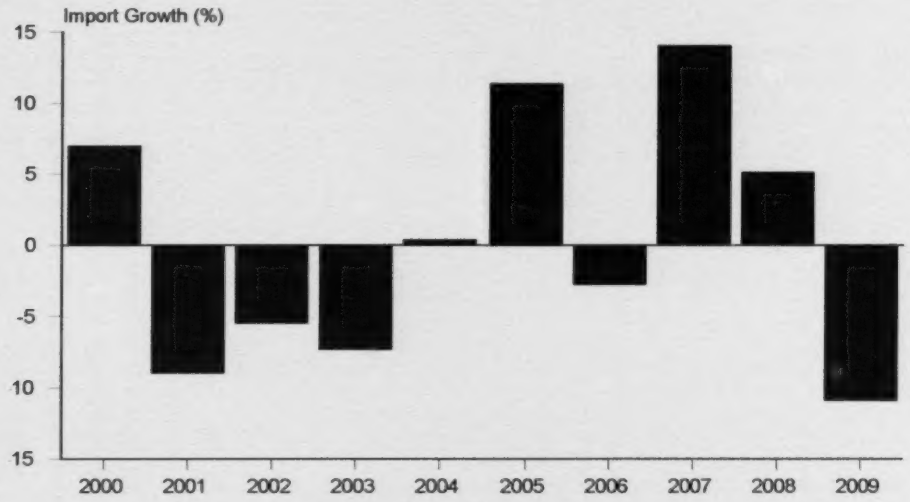
For the first time since at least 1990, the earliest year for which data are available, imports from Mainland China dropped, slipping 1.3%. Nevertheless, with almost $1.1 billion of high tech goods imported into the province from that country in 2009, Mainland China trails only the United States in terms of the value of imports of high tech merchandise into British Columbia. The importance of China as a source for B.C. imports of high tech goods has only developed in the last several years. In 1999, Mainland China was the origin of only 2% of B.C.'s high tech commodity imports. By 2009, 25% of high tech imports into the province were sourced from China.

A significant amount of high tech goods imported into the province is used as input into B.C.'s own high technology manufacturing. However, a large portion of the imports from China are consumer goods such as portable computers and cellular telephones, which suggests that at least some of the growth in imports is consumer-driven and not solely composed of purchases of input components for manufacturing activities of the domestic high tech sector.

There is far more diversification in terms of the origin of high tech imports into B.C. than in the destinations of B.C.'s high tech exports. As a result of the downward trend in imports from the United States, that country's share of B.C.'s high tech import market has shrunk to just 30% in 2009, from well over half just ten years arlier. At 25%, Mainland China ranks second as a source for B.C.'s high tech imports, followed by Mexico with 11%. The $496.2 million in high tech goods

Figure 15

**Growth in B.C. Imports of High Technology Goods**




**Imports of high technology products into B.C. dropped in 2009**

imported from Mexico in 2009 exceeded the value of high tech goods imported from all of the European Union countries combined ($465 million, or just under 11%).

**Imports of most types of high tech products fell in 2009**

As with exports, computer and telecommunications goods are by far the largest category of high technology imports, comprising 58% of high tech product imports, or $2.5 billion. At $0.6 billion, imports of second-ranked life sciences products were valued at just a fraction of that of computers and telecommunications goods, representing just 13% of B.C.'s high technology imports.

The value of imports fell for most of the commodity groups, with the exception of those of which B.C. imports relatively little. The largest percentage decline was for imports of computer integrated manufacturing products, a drop of 23.8%. In terms of absolute numbers, imports of computers and telecommunications products experienced the largest slump, falling by $319 million, or 11.3%.

**B.C. high technology imports by commodity group – 2009**

| | $ millions | % change 2008/2009 |
|---|---|---|
| Computers and Telecommunications | 2,518.4 | -11.3 |
| Life Sciences | 581.6 | -3.9 |
| Aerospace | 404.1 | -16.6 |
| Opto-Electronics | 356.4 | -15.1 |
| Electronics | 245.2 | -10.2 |
| Computer Integrated Manufacturing | 110.6 | -23.8 |
| Biotechnology | 96.2 | 15.8 |
| Weapons and Nuclear | 23.4 | 15.6 |
| Material Design | 21.2 | 7.4 |
| **Total** | **4,357.2** | **-10.9** |

**B.C.'s high tech trade deficit shrank in 2009**

British Columbia imports far more high technology goods than it exports and, as a result, the province runs a substantial trade deficit in these commodities. In 2009, this trade gap narrowed significantly as the drop in imports was far larger than the slump in exports. Nevertheless, the deficit was still $3.3 billion, or nearly four times the total value of B.C.'s high tech exports. In 2009, the value of high technology goods imported into British Columbia was over five times that of high tech exports from the province.

The growth in B.C.'s high tech exports to Mainland China has not kept pace with the phenomenal increase in imports from that country and, as a result, B.C.'s high tech goods trade deficit with China has climbed to over $1 billion, making it British Columbia's largest high tech trade deficit. Prior to 2006, B.C.'s largest deficit was with the United States, but the downward trend in imports has whittled that deficit down to $739.8 million in 2009 from a peak of almost $1.5 billion in 1997. After China and the United States, the next largest deficit is with Mexico, at $489.4 million, which exceeds the combined deficit with all countries of the European Union ($307.9 million). B.C. exports very few high tech goods to Mexico, but imports a large amount, accounting for the substantial deficit.

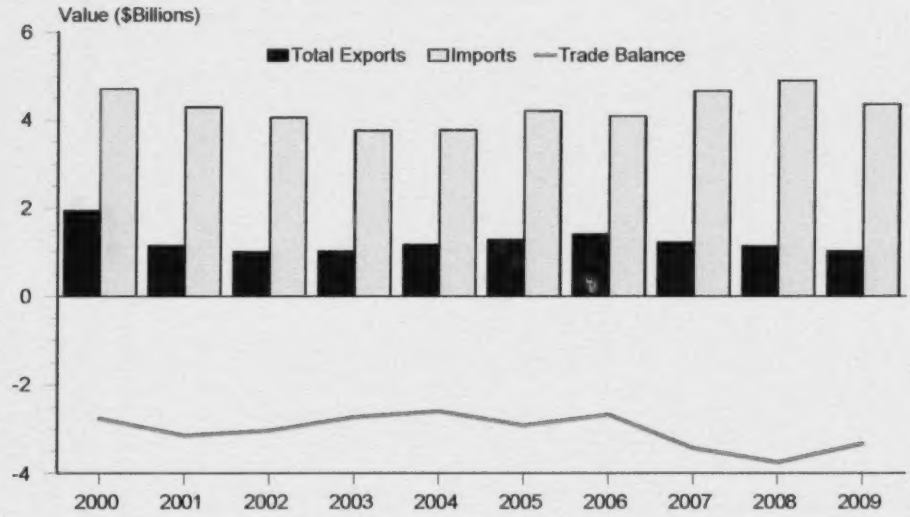
**B.C. balance of trade in high technology goods by commodity group – 2009**

| | $ millions |
|---|---|
| Computer Integrated Manufacturing | -18.5 |
| Material Design | -19.7 |
| Weapons and Nuclear | -20.1 |
| Biotechnology | -92.7 |
| Aerospace | -151.1 |
| Electronics | -203.5 |
| Opto-Electronics | -304.4 |
| Life Sciences | -436.5 |
| Computers and Telecommunications | -2,088.5 |
| **Total** | **-3,335.0** |

The trade deficit spans across all commodity groups. As one might expect, the largest deficits are for goodswith the highest volumes of trade. The trade deficit for computers and telecommunications alone is almost two and a half times the value of all B.C. high tech commodity exports combined.

Figure 16

**B.C. High Technology Balance of Trade in Goods**




**B.C. imports far more high tech goods than it exports**

### The United States exports and imports relatively more high technology goods than Canada

High technology products play a much larger role in American commodity trade than in Canada. In 2009, the United States exported $220.2 billion worth of high tech commodities, which represented almost 21% of total U.S. domestic exports (compared to less than 8% for Canada and just over 3% for British Columbia). Only Quebec, at 21%, has a comparable ratio of high tech to overall goods exports.

High tech products also make up a larger share of total imports into the United States, although the difference is much smaller. In 2009, around 19% of imports into the United States consisted of high technology goods, compared to just over 13% of imports into Canada.

American domestic exports of high technology goods (denominated in Canadian dollars) fell 7.7% in 2009 and imports dipped 2.9% to $343.2 billion. As recently as 1997, the United States had a surplus in trade of high tech goods exceeding $45 billion, but strong growth in imports, particularly from Mainland China, coupled with very little increase in exports has put American trade in high technology goods into a growing deficit position over the last eight years. In 2009, that deficit climbed to a peak of $63.9 billion.[17] The United States' high tech trade deficit to China alone grew to $82.8 billion in 2009. The next largest deficit was with Mexico, at $21.8 billion. At the other end of the scale, the United States' largest surplus in trade of high technology goods was with Canada, at $10.9 billion.

## Service Exports

### Exports of high tech services dipped slightly in 2009

Exports of services are defined as all services provided by B.C. residents to non-residents. For example, service exports take place when B.C.-based professionals, such as engineers or software programmers, work for a period of time outside the country. Service exports also occur when, for example, an engineering firm produces a study in its B.C. office for an overseas client or when a software developer creates a new program that is delivered online to a client in another country.

[17] Note that the balance of trade is calculated by taking the difference of total exports (including re-exports) and subtracting imports. The $220.2 billion export figure for 2009 excludes re-exports, which were $59.2 billion.

Service exports are generally more difficult to measure than exports of goods. Whereas goods exports are tracked through customs documents, providing an administrative record that can be used for statistical purposes, this is not usually the case with regard to service exports. Rather, service exports have to be estimated using surveys and other available information.

Similar to the goods sector, the economic downturn affected exports of services as well. However, the impact was much smaller, particularly in British Columbia, where the value of high tech service exports declined by only 0.5% in 2009. By comparison, total Canadian high technology service exports dropped 4.3%.

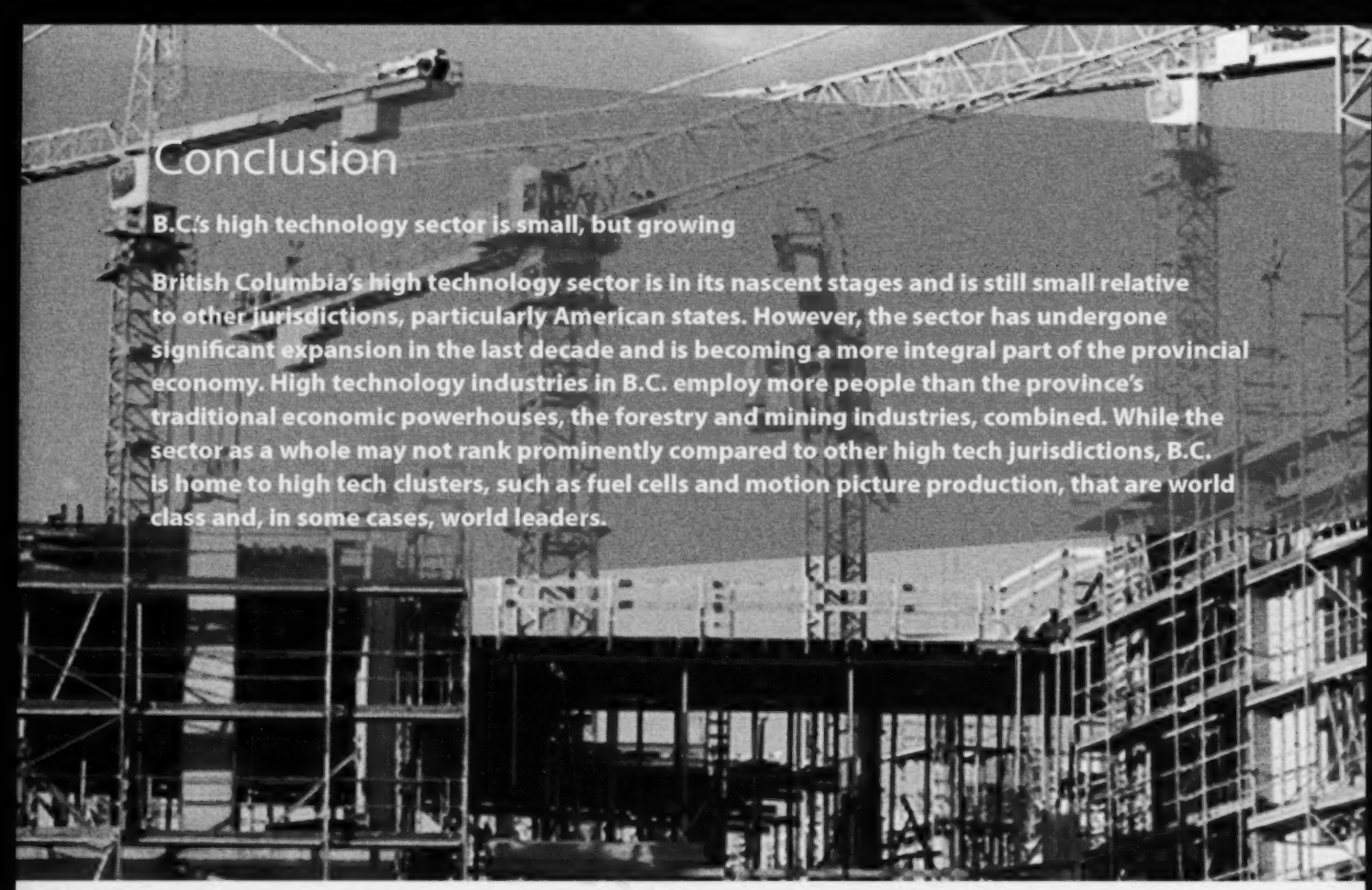
One B.C. industry that bucked the trend was the motion picture production and post-production industry, which saw exports climb 30.0%. British Columbia continues to attract big budget Hollywood productions, despite the appreciation of the Canadian dollar relative to its U.S. counterpart. Enhanced tax credits targeted at the film industry are part of the reason for the substantial increase in the face of unfavourable economic conditions. In addition, B.C.'s high quality, experienced film crews help attract the bigger budget productions that regions with a smaller talent pool are less capable of managing. In 2009, there was actually a drop in the number of international productions shot in B.C., but the budgets for these projects were much larger, such that the overall expenditures in the province by foreign producers experienced strong growth.

**B.C. High Technology Service Exports 2009**

| | $ millions | % change 2008/2009 |
|---|---|---|
| Software Publishers | 1,040 | -0.9 |
| Other Computer and Related Services | 769 | -3.7 |
| Engineering Services | 598 | -8.8 |
| Motion Picture Production & Post-production | 413 | 30.0 |
| Other Services | 313 | -6.6 |
| Telecommunications and Related | 98 | 7.4 |
| **Total** | **3,230** | **-0.5** |

The robust performance of the film and television sector helped offset some of the reductions in service exports elsewhere. The software publishing industry exported almost a third of the total value of high tech service exports from B.C., but exports edged down 0.9% in 2009. Other computer and related services rank second in terms of high tech service exports, and that industry saw the value of its exports drop 3.7%. Exports of engineering services fell 8.8%, but telecommunications and related service exports jumped 7.4%. Exports of other high tech services dropped 6.6%.

The high technology sector in British Columbia exports far more services than goods. In 2009, services represented 79% of B.C.'s total high technology exports (i.e., goods plus services). Nationally, the story is quite different, with service exports comprising only 37% of total high tech exports. Canada's high tech manufacturing is concentrated mostly in Quebec and Ontario, and a large percentage of these goods are produced for export, which is one of the reasons for the greater emphasis on goods exports for Canada's high tech sector as opposed to the domination of service exports in British Columbia.



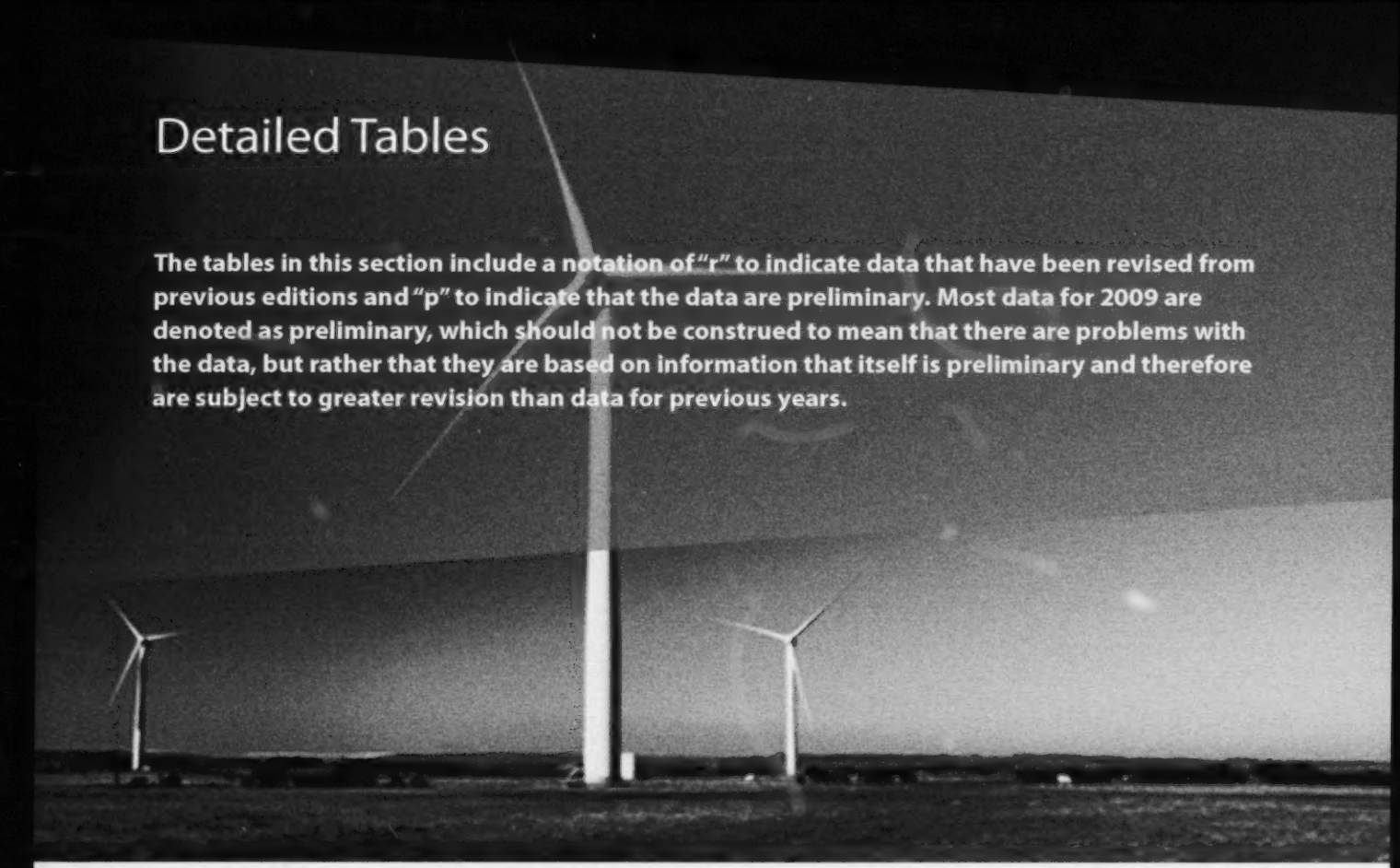
# Conclusion

**B.C.'s high technology sector is small, but growing**

**British Columbia's high technology sector is in its nascent stages and is still small relative to other jurisdictions, particularly American states. However, the sector has undergone significant expansion in the last decade and is becoming a more integral part of the provincial economy. High technology industries in B.C. employ more people than the province's traditional economic powerhouses, the forestry and mining industries, combined. While the sector as a whole may not rank prominently compared to other high tech jurisdictions, B.C. is home to high tech clusters, such as fuel cells and motion picture production, that are world class and, in some cases, world leaders.**

B.C.'s high tech sector faces a number of challenges, including a high-valued Canadian dollar relative to its American counterpart, a return to a tight labour market and a smaller domestic marketplace. This may give B.C. companies a competitive disadvantage, especially with many of their American counterparts, but also with high tech firms in central Canada. Nevertheless, given the significance of high technology products in today's world and the combination of lucrative revenues and well-paid employment high tech industries offer, there is little doubt that high technology will remain a priority sector.

# Detailed Tables



**The tables in this section include a notation of "r" to indicate data that have been revised from previous editions and "p" to indicate that the data are preliminary. Most data for 2009 are denoted as preliminary, which should not be construed to mean that there are problems with the data, but rather that they are based on information that itself is preliminary and therefore are subject to greater revision than data for previous years.**

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## Table 1. B.C. Gross Domestic Product (GDP) (Constant Dollar) at Basic Prices,[1] by Industry, 1999-2009

| | Chained 2002 $ million | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **INDUSTRY** | **1999[r]** | **2000[r]** | **2001[r]** | **2002[r]** | **2003[r]** | **2004[r]** | **2005[r]** | **2006[r]** | **2007[r]** | **2008** | **2009[p]** |
| **Manufacturing** | **759** | **1,269** | **1,097** | **931** | **900** | **943** | **1,028** | **1,130** | **1,160** | **1,146** | **1,036** |
| **Services** | **4,874** | **5,186** | **5,362** | **5,944** | **6,376** | **6,649** | **7,124** | **7,413** | **8,178** | **8,424** | **8,323** |
| Telecommunications and Film[2] | 2,715 | 2,793 | 2,698 | 2,998 | 3,228 | 3,145 | 3,364 | 3,438 | 3,628 | 3,732 | 3,806 |
| Engineering services | 935 | 926 | 987 | 942 | 929 | 929 | 996 | 1,107 | 1,240 | 1,269 | 1,176 |
| Computer and related services | 971 | 1,167 | 1,318 | 1,439 | 1,630 | 1,870 | 1,957 | 2,107 | 2,362 | 2,376 | 2,306 |
| Other services | 268 | 303 | 356 | 565 | 591 | 726 | 823 | 786 | 977 | 1,061 | 1,042 |
| **High Technology Sector Total** | **5,811** | **6,481** | **6,457** | **6,875** | **7,284** | **7,555** | **8,084** | **8,503** | **9,295** | **9,544** | **9,345** |
| **BC Industrial Aggregate** | **116,307** | **121,546** | **122,848** | **126,761** | **130,026** | **135,021** | **141,339** | **146,762** | **150,874** | **150,833** | **148,082** |

| | % change from previous year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **INDUSTRY** | **2000[r]** | **2001[r]** | **2002[r]** | **2003[r]** | **2004[r]** | **2005[r]** | **2006[r]** | **2007[r]** | **2008** | **2009[p]** |
| **Manufacturing** | **67.1** | **-13.5** | **-15.1** | **-3.3** | **4.8** | **8.9** | **9.9** | **2.7** | **-1.2** | **-9.6** |
| **Services** | **6.4** | **3.4** | **10.8** | **7.3** | **4.3** | **7.2** | **4.1** | **10.3** | **3.0** | **-1.2** |
| Telecommunications and Film[2] | 2.9 | -3.4 | 11.1 | 7.7 | -2.6 | 7.0 | 2.2 | 5.5 | 2.9 | 2.0 |
| Engineering services | -1.0 | 6.6 | -4.6 | -1.4 | -0.1 | 7.2 | 11.2 | 12.0 | 2.3 | -7.3 |
| Computer and related services | 20.2 | 13.0 | 9.2 | 13.2 | 14.7 | 4.7 | 7.6 | 12.1 | 0.6 | -2.9 |
| Other services | 13.0 | 17.8 | 58.5 | 4.6 | 22.9 | 13.5 | -4.6 | 24.4 | 8.5 | -1.7 |
| **High Technology Sector Total** | **11.5** | **-0.4** | **6.5** | **5.9** | **3.7** | **7.0** | **5.2** | **9.3** | **2.7** | **-2.1** |
| **BC Industrial Aggregate** | **4.5** | **1.1** | **3.2** | **2.6** | **3.8** | **4.7** | **3.8** | **2.8** | **0.0** | **-1.8** |

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concepts is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

2. The telecommunications and motion picture production and post-production industries have been combined due to confidentiality requirements.

[r] Revised

[p] Preliminary

Source: BC Stats and Statistics Canada

## Table 2. B.C. Gross Domestic Product (GDP) (Current Dollar) at Basic Prices,[1] by Industry, 1999-2009

$ million

| INDUSTRY | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing** | **923** | **1,280** | **1,087** | **931** | **936** | **955** | **1,012** | **1,150** | **1,222** | **1,209** | **1,065** |
| **Services** | **4,709** | **5,087** | **5,301** | **5,944** | **6,563** | **7,032** | **7,556** | **7,897** | **9,120** | **9,299** | **9,396** |
| Telecommunications and Film[2] | 2,614 | 2,712 | 2,654 | 2,998 | 3,418 | 3,440 | 3,644 | 3,781 | 4,257 | 4,191 | 4,489 |
| Engineering services | 837 | 884 | 963 | 942 | 940 | 1,011 | 1,144 | 1,286 | 1,523 | 1,520 | 1,309 |
| Computer and related services | 1,040 | 1,219 | 1,343 | 1,439 | 1,604 | 1,810 | 1,869 | 1,930 | 2,157 | 2,220 | 2,222 |
| Other services | 219 | 272 | 340 | 565 | 601 | 771 | 899 | 900 | 1,183 | 1,369 | 1,377 |
| **High Technology Sector Total** | **5,632** | **6,367** | **6,388** | **6,875** | **7,499** | **7,988** | **8,568** | **9,047** | **10,342** | **10,508** | **10,461** |
| **BC Industrial Aggregate** | **110,806** | **120,756** | **122,772** | **126,764** | **133,213** | **144,463** | **155,533** | **167,375** | **176,299** | **182,731** | **176,554** |
| **High Technology as a % of Total** | **5.1** | **5.3** | **5.2** | **5.4** | **5.6** | **5.5** | **5.5** | **5.4** | **5.9** | **5.8** | **5.9** |

% change from previous year

| INDUSTRY | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing** | **38.7** | **-15.1** | **-14.3** | **0.5** | **2.1** | **5.9** | **13.7** | **6.3** | **-1.1** | **-11.9** |
| **Services** | **8.0** | **4.2** | **12.1** | **10.4** | **7.2** | **7.5** | **4.5** | **15.5** | **2.0** | **1.0** |
| Telecommunications and Film[2] | 3.8 | -2.2 | 13.0 | 14.0 | 0.7 | 5.9 | 3.7 | 12.6 | -1.5 | 7.1 |
| Engineering services | 5.6 | 9.0 | -2.2 | -0.2 | 7.5 | 13.2 | 12.4 | 18.4 | -0.2 | -13.9 |
| Computer and related services | 17.3 | 10.2 | 7.1 | 11.5 | 12.9 | 3.2 | 3.3 | 11.8 | 2.9 | 0.1 |
| Other services | 24.0 | 25.2 | 65.9 | 6.5 | 28.3 | 16.6 | 0.1 | 31.5 | 15.7 | 0.6 |
| **High Technology Sector Total** | **13.1** | **0.3** | **7.6** | **9.1** | **6.5** | **7.3** | **5.6** | **14.3** | **1.6** | **-0.4** |
| **BC Industrial Aggregate** | **9.0** | **1.7** | **3.3** | **5.1** | **8.4** | **7.7** | **7.6** | **5.3** | **3.6** | **-3.4** |

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concepts is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

2. The telecommunications and motion picture production and post-production industries have been combined due to confidentiality requirements.

[r] Revised

[p] Preliminary

Source: BC Stats and Statistics Canada

## Table 3. B.C. Gross Domestic Product (GDP) at basic prices,[1] Selected Activities, 1999-2009

**Chained (2002 $ million)**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Goods-producing industries** | **29,145** | **31,322** | **30,714** | **31,664** | **32,429** | **34,252** | **36,334** | **37,237** | **37,198** | **35,952** | **32,892** |
| Agriculture, forestry, fishing and hunting | 4,424 | 4,359 | 4,474 | 4,430 | 4,500 | 4,851 | 4,859 | 4,793 | 4,619 | 4,037 | 3,630 |
| Crop and animal production | 979 | 975 | 1,141 | 1,058 | 1,053 | 1,057 | 1,061 | 1,078 | 1,134 | 1,075 | 1,030 |
| Forestry and logging | 2,789 | 2,638 | 2,647 | 2,713 | 2,761 | 3,129 | 3,102 | 3,022 | 2,855 | 2,343 | 1,966 |
| Fishing, hunting and trapping | 118 | 135 | 111 | 134 | 130 | 150 | 146 | 164 | 128 | 110 | 113 |
| Support activities for agriculture and forestry | 542 | 626 | 582 | 524 | 556 | 538 | 570 | 547 | 512 | 490 | 477 |
| Mining, oil and gas extraction | 3,329 | 3,344 | 4,252 | 4,383 | 4,298 | 4,270 | 4,643 | 4,645 | 4,422 | 4,371 | 4,144 |
| Utilities | 3,040 | 3,058 | 2,389 | 2,837 | 2,844 | 2,819 | 3,236 | 2,882 | 3,268 | 3,176 | 2,993 |
| Construction | 5,881 | 5,795 | 6,021 | 6,328 | 6,927 | 7,675 | 8,115 | 8,936 | 9,097 | 9,676 | 9,022 |
| Manufacturing | 12,840 | 14,990 | 13,667 | 13,687 | 13,884 | 14,723 | 15,435 | 15,904 | 15,885 | 14,163 | 12,330 |
| Food manufacturing | * | * | * | 1,399 | 1,348 | 1,383 | 1,483 | 1,490 | 1,511 | 1,510 | 1,531 |
| Wood product manufacturing | 3,792 | 4,182 | 3,432 | 3,979 | 4,074 | 4,574 | 5,030 | 5,055 | 4,730 | 3,811 | 3,206 |
| Pulp and paper manufacturing | * | * | * | 1,453 | 1,461 | 1,549 | 1,669 | 1,615 | 1,698 | 1,470 | 1,273 |
| Primary and fabricated metal manufacturing | * | * | * | 1,509 | 1,523 | 1,678 | 1,718 | 1,775 | 1,843 | 1,626 | 1,429 |
| Computer and electronic product manufacturing | * | * | * | 409 | 375 | 467 | 506 | 587 | 559 | 632 | 544 |
| **Service-producing industries** | **87,073** | **90,128** | **92,061** | **95,097** | **97,599** | **101,026** | **105,217** | **109,809** | **114,098** | **115,474** | **115,996** |
| Wholesale trade | 5,394 | 5,567 | 5,656 | 5,969 | 6,258 | 6,430 | 6,664 | 6,987 | 7,508 | 7,211 | 6,622 |
| Retail trade | 6,764 | 7,122 | 7,399 | 7,597 | 7,857 | 8,280 | 8,772 | 9,477 | 9,961 | 9,968 | 9,706 |
| Transportation and warehousing | 7,575 | 8,122 | 7,997 | 8,072 | 8,135 | 8,447 | 9,208 | 9,390 | 9,412 | 9,281 | 8,893 |
| Information and cultural services | 3,788 | 4,013 | 4,108 | 4,667 | 4,999 | 5,130 | 5,351 | 5,445 | 5,705 | 5,895 | 5,895 |
| Finance, insurance, real estate, leasing, etc | 25,838 | 26,284 | 27,019 | 28,078 | 28,884 | 30,503 | 31,834 | 33,290 | 34,698 | 35,282 | 36,555 |
| Professional, scientific and technical services | 4,952 | 5,301 | 5,419 | 5,550 | 5,753 | 6,021 | 6,384 | 6,998 | 7,497 | 7,606 | 7,509 |
| Administration and support, waste mgmt. | 2,340 | 2,268 | 2,370 | 2,512 | 2,557 | 2,781 | 3,087 | 3,235 | 3,414 | 3,519 | 3,424 |
| Education | 6,479 | 6,630 | 6,733 | 6,781 | 6,922 | 7,028 | 7,253 | 7,407 | 7,642 | 7,889 | 8,025 |
| Health care and social assistance | 8,707 | 9,156 | 9,359 | 9,410 | 9,554 | 9,192 | 9,125 | 9,423 | 9,581 | 9,765 | 10,070 |
| Arts, entertainment and recreation | 1,454 | 1,467 | 1,537 | 1,567 | 1,555 | 1,610 | 1,599 | 1,692 | 1,758 | 1,721 | 1,762 |
| Accommodation and food services | 3,825 | 3,920 | 3,899 | 3,944 | 3,984 | 4,152 | 4,247 | 4,342 | 4,440 | 4,500 | 4,409 |
| Other services | 3,217 | 3,402 | 3,655 | 3,823 | 3,949 | 4,042 | 4,220 | 4,404 | 4,496 | 4,567 | 4,527 |
| Public administration | 6,588 | 6,790 | 6,919 | 7,128 | 7,188 | 7,202 | 7,268 | 7,506 | 7,772 | 8,031 | 8,294 |
| **GDP at basic prices** | **116,307** | **121,546** | **122,848** | **126,761** | **130,026** | **135,021** | **141,339** | **146,762** | **150,874** | **150,833** | **148,082** |

**% change from previous year**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Goods-producing industries** | **7.5** | **-1.9** | **3.1** | **2.4** | **5.6** | **6.1** | **2.5** | **-0.1** | **-3.4** | **-8.5** |
| Agriculture, forestry, fishing and hunting | -1.5 | 2.6 | -1.0 | 1.6 | 7.8 | 0.2 | -1.4 | -3.6 | -12.6 | -10.1 |
| Crop and animal production | -0.4 | 17.0 | -7.3 | -0.4 | 0.4 | 0.4 | 1.6 | 5.2 | -5.1 | -4.3 |
| Forestry and logging | -5.4 | 0.3 | 2.5 | 1.8 | 13.3 | -0.9 | -2.6 | -5.5 | -17.9 | -16.1 |
| Fishing, hunting and trapping | 14.6 | -17.5 | 21.0 | -3.0 | 15.3 | -2.5 | 12.2 | -22.2 | -14.1 | 3.2 |
| Support activities for agriculture and forestry | 15.5 | -7.0 | -10.0 | 6.0 | -3.2 | 6.0 | -4.0 | -6.5 | -4.2 | -2.6 |
| Mining, oil and gas extraction | 0.5 | 27.1 | 3.1 | -1.9 | -0.7 | 8.7 | 0.0 | -4.8 | -1.2 | -5.2 |
| Utilities | 0.6 | -21.9 | 18.7 | 0.3 | -0.9 | 14.8 | -10.9 | 13.4 | -2.8 | -5.8 |
| Construction | -1.5 | 3.9 | 5.1 | 9.5 | 10.8 | 5.7 | 10.1 | 1.8 | 6.4 | -6.8 |
| Manufacturing | 16.7 | -8.8 | 0.1 | 1.4 | 6.0 | 4.8 | 3.0 | -0.1 | -10.8 | -12.9 |
| Food manufacturing | * | * | * | -3.6 | 2.6 | 7.2 | 0.5 | 1.4 | 0.0 | 1.4 |
| Wood product manufacturing | 10.3 | -17.9 | 15.9 | 2.4 | 12.3 | 10.0 | 0.5 | -6.4 | -19.4 | -15.9 |
| Pulp and paper manufacturing | * | * | * | 0.6 | 6.0 | 7.8 | -3.3 | 5.2 | -13.4 | -13.4 |
| Primary and fabricated metal manufacturing | * | * | * | 0.9 | 10.2 | 2.4 | 3.3 | 3.8 | -11.8 | -12.1 |
| Computer and electronic product manufacturing | * | * | * | -8.2 | 24.5 | 8.2 | 16.2 | -4.8 | 13.0 | -14.0 |
| **Service-producing industries** | **3.5** | **2.1** | **3.3** | **2.6** | **3.5** | **4.1** | **4.4** | **3.9** | **1.2** | **0.5** |
| Wholesale trade | 3.2 | 1.6 | 5.5 | 4.8 | 2.8 | 3.6 | 4.9 | 7.5 | -4.0 | -8.2 |
| Retail trade | 5.3 | 3.9 | 2.7 | 3.4 | 5.4 | 5.9 | 8.0 | 5.1 | 0.1 | -2.6 |
| Transportation and warehousing | 7.2 | -1.5 | 0.9 | 0.8 | 3.8 | 9.0 | 2.0 | 0.2 | -1.4 | -4.2 |
| Information and cultural services | 5.9 | 2.4 | 13.6 | 7.1 | 2.6 | 4.3 | 1.8 | 4.8 | 3.3 | 0.0 |
| Finance, insurance, real estate, leasing, etc | 1.7 | 2.8 | 3.9 | 2.9 | 5.6 | 4.4 | 4.6 | 4.2 | 1.7 | 3.6 |
| Professional, scientific and technical services | 7.0 | 2.2 | 2.4 | 3.7 | 4.6 | 6.0 | 9.6 | 7.1 | 1.5 | -1.3 |
| Administration and support, waste mgmt. | -3.1 | 4.5 | 6.0 | 1.8 | 8.8 | 11.0 | 4.8 | 5.5 | 3.1 | -2.7 |
| Education | 2.3 | 1.6 | 0.7 | 2.1 | 1.5 | 3.2 | 2.1 | 3.2 | 3.2 | 1.7 |
| Health care and social assistance | 5.2 | 2.2 | 0.6 | 1.5 | -3.8 | -0.7 | 3.3 | 1.7 | 1.9 | 3.1 |
| Arts, entertainment and recreation | 0.9 | 4.8 | 1.9 | -0.8 | 3.6 | -0.7 | 5.8 | 3.9 | -2.1 | 2.3 |
| Accommodation and food services | 2.5 | -0.5 | 1.2 | 1.0 | 4.2 | 2.3 | 2.2 | 2.3 | 1.3 | -2.0 |
| Other services | 5.7 | 7.5 | 4.6 | 3.3 | 2.4 | 4.4 | 4.4 | 2.1 | 1.6 | -0.9 |
| Public administration | 3.1 | 1.9 | 3.0 | 0.8 | 0.2 | 0.9 | 3.3 | 3.5 | 3.3 | 3.3 |
| **GDP at basic prices** | **4.5** | **1.1** | **3.2** | **2.6** | **3.8** | **4.7** | **3.8** | **2.8** | **0.0** | **-1.8** |

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concepts is that the factor cost estimate includes all subsidies and excludes all indirect taxes

* Data has been suppressed due to confidentiality requirements.

Source: Statistics Canada

## Table 4. High Technology GDP (Constant Dollar) at Basic Prices,[1] by Province, 1999-2009

**Chained 2002 $ million**

| Province | | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Canada** | Manufacturing | 22,363 | 27,253 | 23,098 | 20,425 | 20,328 | 20,787 | 21,534 | 22,406 | 22,043 | 22,267 | 21,659 |
| | Services | 41,287 | 44,429 | 47,344 | 50,676 | 53,557 | 56,498 | 59,266 | 61,818 | 65,421 | 68,920 | 71,878 |
| | Total | 65,810 | 72,189 | 69,820 | 71,101 | 74,100 | 77,297 | 80,269 | 83,468 | 87,033 | 91,261 | 92,760 |
| **British Columbia** | Manufacturing | 759 | 1,269 | 1,097 | 931 | 900 | 943 | 1,028 | 1,130 | 1,160 | 1,146 | 1,036 |
| | Services | 4,874 | 5,186 | 5,362 | 5,944 | 6,376 | 6,649 | 7,124 | 7,413 | 8,178 | 8,424 | 8,323 |
| | Total | 5,811 | 6,481 | 6,457 | 6,875 | 7,284 | 7,555 | 8,084 | 8,503 | 9,295 | 9,544 | 9,345 |
| **Alberta** | Manufacturing | 1,257 | 1,660 | 941 | 870 | 757 | 855 | 810 | 805 | 732 | 780 | 654 |
| | Services | 5,646 | 5,875 | 6,490 | 6,826 | 7,366 | 8,044 | 8,500 | 9,403 | 9,647 | 10,172 | 9,863 |
| | Total | 6,875 | 7,500 | 7,428 | 7,696 | 8,127 | 8,907 | 9,362 | 10,164 | 10,423 | 10,944 | 10,408 |
| **Manitoba** | Manufacturing | 597 | 599 | 440 | 431 | 624 | 546 | 528 | 547 | 609 | 574 | 639 |
| | Services | 1,013 | 1,007 | 1,044 | 1,139 | 1,169 | 1,256 | 1,371 | 1,400 | 1,425 | 1,988 | 2,088 |
| | Total | 1,570 | 1,536 | 1,473 | 1,570 | 1,851 | 1,882 | 1,887 | 1,995 | 2,107 | 2,651 | 2,814 |
| **Ontario** | Manufacturing | 9,916 | 10,773 | 9,505 | 9,226 | 9,019 | 9,333 | 9,592 | 10,734 | 10,429 | 10,346 | 10,260 |
| | Services | 17,697 | 19,334 | 21,017 | 22,324 | 23,339 | 24,498 | 25,377 | 25,984 | 27,178 | 28,185 | 28,570 |
| | Total | 27,495 | 29,688 | 30,391 | 31,550 | 32,127 | 33,421 | 34,269 | 35,885 | 36,736 | 37,689 | 37,448 |
| **Quebec** | Manufacturing | 10,868 | 12,625 | 9,968 | 8,455 | 8,421 | 8,542 | 8,907 | 8,499 | 8,354 | 8,485 | 7,895 |
| | Services | 9,153 | 9,531 | 10,046 | 10,764 | 11,152 | 11,472 | 11,914 | 12,456 | 13,371 | 13,926 | 14,599 |
| | Total | 19,938 | 21,989 | 19,917 | 19,220 | 19,360 | 19,542 | 20,172 | 20,485 | 20,816 | 21,898 | 21,461 |

**% change from previous year**

| Province | | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Canada** | Manufacturing | 21.9 | -15.2 | -11.6 | -0.5 | 2.3 | 3.6 | 4.1 | -1.6 | 1.0 | -2.7 |
| | Services | 7.6 | 6.6 | 7.0 | 5.7 | 5.5 | 4.9 | 4.3 | 5.8 | 5.3 | 4.3 |
| | Total | 9.7 | -3.3 | 1.8 | 4.2 | 4.3 | 3.8 | 4.0 | 4.3 | 4.9 | 1.6 |
| **British Columbia** | Manufacturing | 67.1 | -13.5 | -15.1 | -3.3 | 4.8 | 8.9 | 9.9 | 2.7 | -1.2 | -9.6 |
| | Services | 6.4 | 3.4 | 10.8 | 7.3 | 4.3 | 7.2 | 4.1 | 10.3 | 3.0 | -1.2 |
| | Total | 11.5 | -0.4 | 6.5 | 5.9 | 3.7 | 7.0 | 5.2 | 9.3 | 2.7 | -2.1 |
| **Alberta** | Manufacturing | 32.1 | -43.3 | -7.5 | -13.0 | 12.9 | -5.3 | -0.6 | -9.1 | 6.6 | -16.2 |
| | Services | 4.0 | 10.5 | 5.2 | 7.9 | 9.2 | 5.7 | 10.6 | 2.6 | 5.4 | -3.0 |
| | Total | 9.1 | -1.0 | 3.6 | 5.6 | 9.6 | 5.1 | 8.6 | 2.5 | 5.0 | -4.9 |
| **Manitoba** | Manufacturing | 0.3 | -26.6 | -2.0 | 44.7 | -12.5 | -3.2 | 3.5 | 11.3 | -5.7 | 11.4 |
| | Services | -0.6 | 3.6 | 9.1 | 2.7 | 7.4 | 9.2 | 2.1 | 1.8 | 39.5 | 5.0 |
| | Total | -2.1 | -4.1 | 6.6 | 17.9 | 1.7 | 0.3 | 5.7 | 5.6 | 25.8 | 6.2 |
| **Ontario** | Manufacturing | 8.6 | -11.8 | -2.9 | -2.2 | 3.5 | 2.8 | 11.9 | -2.8 | -0.8 | -0.8 |
| | Services | 9.3 | 8.7 | 6.2 | 4.5 | 5.0 | 3.6 | 2.4 | 4.6 | 3.7 | 1.4 |
| | Total | 8.0 | 2.4 | 3.8 | 1.8 | 4.0 | 2.5 | 4.7 | 2.4 | 2.6 | -0.6 |
| **Quebec** | Manufacturing | 16.2 | -21.0 | -15.2 | -0.4 | 1.4 | 4.3 | -4.6 | -1.7 | 1.6 | -7.0 |
| | Services | 4.1 | 5.4 | 7.1 | 3.6 | 2.9 | 3.9 | 4.6 | 7.3 | 4.2 | 4.8 |
| | Total | 10.3 | -9.4 | -3.5 | 0.7 | 0.9 | 3.2 | 1.6 | 1.6 | 5.2 | -2.0 |

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concepts is that the factor cost estimate includes all subsidies and excludes all indirect taxes.

[r] Revised

[p] Preliminary

Source: BC Stats

## Table 5. High Technology GDP (Current Dollar) at Basic Prices,[1] by Province and the U.S., 1999-2009

Cdn $ million

| Region | | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Canada** | Manufacturing | 22,673 | 26,153 | 21,911 | 20,425 | 20,794 | 21,335 | 21,927 | 23,326 | 23,493 | 25,051 | 23,623 |
| | Services | 40,128 | 43,457 | 46,943 | 50,676 | 54,053 | 58,064 | 62,070 | 65,473 | 71,408 | 77,339 | 81,193 |
| | Total | 62,801 | 69,610 | 68,854 | 71,101 | 74,847 | 79,399 | 83,997 | 88,800 | 94,901 | 102,389 | 104,816 |
| **British Columbia** | Manufacturing | 923 | 1,280 | 1,087 | 931 | 936 | 955 | 1,012 | 1,150 | 1,222 | 1,209 | 1,065 |
| | Services | 4,709 | 5,087 | 5,301 | 5,944 | 6,563 | 7,032 | 7,556 | 7,897 | 9,120 | 9,299 | 9,396 |
| | Total | 5,632 | 6,367 | 6,388 | 6,875 | 7,499 | 7,988 | 8,568 | 9,047 | 10,342 | 10,508 | 10,461 |
| **Alberta** | Manufacturing | 1,205 | 1,595 | 928 | 870 | 780 | 916 | 939 | 813 | 870 | 858 | 674 |
| | Services | 5,371 | 5,693 | 6,397 | 6,826 | 7,599 | 8,621 | 9,494 | 10,565 | 11,452 | 12,080 | 12,715 |
| | Total | 6,576 | 7,288 | 7,325 | 7,696 | 8,380 | 9,537 | 10,433 | 11,378 | 12,322 | 12,938 | 13,389 |
| **Manitoba** | Manufacturing | 544 | 555 | 429 | 431 | 696 | 659 | 557 | 631 | 725 | 788 | 841 |
| | Services | 995 | 1,005 | 1,036 | 1,139 | 1,189 | 1,306 | 1,447 | 1,476 | 1,534 | 2,200 | 2,318 |
| | Total | 1,539 | 1,560 | 1,465 | 1,570 | 1,885 | 1,965 | 2,003 | 2,107 | 2,259 | 2,989 | 3,160 |
| **Ontario** | Manufacturing | 9,577 | 10,327 | 9,279 | 9,226 | 9,185 | 9,583 | 9,851 | 11,213 | 11,052 | 11,652 | 11,476 |
| | Services | 17,319 | 19,387 | 21,063 | 22,324 | 23,611 | 25,550 | 26,959 | 27,663 | 29,869 | 32,692 | 34,480 |
| | Total | 26,896 | 29,714 | 30,342 | 31,550 | 32,796 | 35,133 | 36,809 | 38,876 | 40,921 | 44,344 | 45,956 |
| **Quebec** | Manufacturing | 10,132 | 11,822 | 9,705 | 8,455 | 8,662 | 8,702 | 8,916 | 8,779 | 8,748 | 9,645 | 8,619 |
| | Services | 8,751 | 9,073 | 9,818 | 10,764 | 11,350 | 11,828 | 12,541 | 13,227 | 14,634 | 15,637 | 16,639 |
| | Total | 18,883 | 20,895 | 19,522 | 19,220 | 20,012 | 20,530 | 21,457 | 22,006 | 23,382 | 25,282 | 25,259 |
| **United States[2]** | Manufacturing | 468,323 | 506,553 | 480,500 | 496,666 | 454,120 | 455,496 | 460,544 | 475,964 | 469,571 | 464,444 | 455,353 |
| | Services | 859,300 | 899,245 | 1,016,239 | 1,096,202 | 997,710 | 1,012,087 | 1,007,497 | 999,931 | 1,014,871 | 1,054,778 | 1,101,760 |
| | Total | 1,327,623 | 1,405,798 | 1,496,739 | 1,592,868 | 1,451,830 | 1,467,583 | 1,468,042 | 1,475,895 | 1,484,442 | 1,519,222 | 1,557,113 |

% change from previous year

| Region | | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Canada** | Manufacturing | 15.3 | -16.2 | -6.8 | 1.8 | 2.6 | 2.8 | 6.4 | 0.7 | 6.6 | -5.7 |
| | Services | 8.3 | 8.0 | 8.0 | 6.7 | 7.4 | 6.9 | 5.5 | 9.1 | 8.3 | 5.0 |
| | Total | 10.8 | -1.1 | 3.3 | 5.3 | 6.1 | 5.8 | 5.7 | 6.9 | 7.9 | 2.4 |
| **British Columbia** | Manufacturing | 38.7 | -15.1 | -14.3 | 0.5 | 2.1 | 5.9 | 13.7 | 6.3 | -1.1 | -11.9 |
| | Services | 8.0 | 4.2 | 12.1 | 10.4 | 7.2 | 7.5 | 4.5 | 15.5 | 2.0 | 1.0 |
| | Total | 13.1 | 0.3 | 7.6 | 9.1 | 6.5 | 7.3 | 5.6 | 14.3 | 1.6 | -0.4 |
| **Alberta** | Manufacturing | 32.4 | -41.8 | -6.3 | -10.3 | 17.4 | 2.5 | -13.4 | 6.9 | -1.4 | -21.4 |
| | Services | 6.0 | 12.4 | 6.7 | 11.3 | 13.4 | 10.1 | 11.3 | 8.4 | 5.5 | 5.3 |
| | Total | 10.8 | 0.5 | 5.1 | 8.9 | 13.8 | 9.4 | 9.1 | 8.3 | 5.0 | 3.5 |
| **Manitoba** | Manufacturing | 2.0 | -22.8 | 0.5 | 61.6 | -5.4 | -15.5 | 13.4 | 14.9 | 8.7 | 6.7 |
| | Services | 1.0 | 3.0 | 10.0 | 4.4 | 9.9 | 10.7 | 2.0 | 3.9 | 43.5 | 5.4 |
| | Total | 1.4 | -6.1 | 7.2 | 20.1 | 4.2 | 2.0 | 5.2 | 7.2 | 32.3 | 5.7 |
| **Ontario** | Manufacturing | 7.8 | -10.1 | -0.6 | -0.4 | 4.3 | 2.8 | 13.8 | -1.4 | 5.4 | -1.5 |
| | Services | 11.9 | 8.6 | 6.0 | 5.8 | 8.2 | 5.5 | 2.6 | 8.0 | 9.4 | 5.5 |
| | Total | 10.5 | 2.1 | 4.0 | 3.9 | 7.1 | 4.8 | 5.6 | 5.3 | 8.4 | 3.6 |
| **Quebec** | Manufacturing | 16.7 | -17.9 | -12.9 | 2.4 | 0.5 | 2.5 | -1.5 | -0.4 | 10.3 | -10.6 |
| | Services | 3.7 | 8.2 | 9.6 | 5.4 | 4.2 | 6.0 | 5.5 | 10.6 | 6.9 | 6.4 |
| | Total | 10.7 | -6.6 | -1.6 | 4.1 | 2.6 | 4.5 | 2.6 | 6.3 | 8.1 | -0.1 |
| **United States** | Manufacturing | 8.2 | -5.1 | 3.4 | -8.6 | 0.3 | 1.1 | 3.3 | -1.3 | -1.1 | -2.0 |
| | Services | 4.6 | 13.0 | 7.9 | -9.0 | 1.4 | -0.5 | -0.8 | 1.5 | 3.9 | 4.5 |
| | Total | 5.9 | 6.5 | 6.4 | -8.9 | 1.1 | 0.0 | 0.5 | 0.6 | 2.3 | 2.5 |

1. Industry-based GDP data are now reported at basic prices. Previously a "factor cost" method of calculation was used. The difference between the basic price and factor cost concepts is that the factor cost estimate includes all subsidies and excludes all indirect taxes.
2. Figures for the United States were converted from U.S. dollar data using an average annual exchange rate.

r Revised
p Preliminary

Source: BC Stats

## Table 6. High Technology GDP (current dollar) for Selected States,[1] 1999-2009

**Value ($Cdn million)[2]**

| State | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **1,327,623** | **1,405,798** | **1,496,739** | **1,592,868** | **1,451,830** | **1,467,583** | **1,468,042** | **1,475,895** | **1,484,442** | **1,519,222** | **1,557,113** |
| California | 257,548 | 284,388 | 284,377 | 283,024 | 252,464 | 257,988 | 264,359 | 255,375 | 258,827 | 258,867 | 272,980 |
| Texas | 100,435 | 109,492 | 113,091 | 120,265 | 102,235 | 106,566 | 108,803 | 112,159 | 107,085 | 108,240 | 114,073 |
| New York | 83,212 | 88,055 | 95,362 | 96,061 | 85,435 | 86,162 | 86,216 | 86,702 | 85,152 | 84,927 | 94,717 |
| Florida | 47,526 | 50,449 | 54,249 | 59,463 | 53,284 | 55,324 | 55,647 | 54,392 | 54,352 | 54,659 | 57,692 |
| Virginia | 43,435 | 45,476 | 52,789 | 55,728 | 50,193 | 52,208 | 51,056 | 48,446 | 47,914 | 47,480 | 54,021 |
| Massachusetts | 48,628 | 57,189 | 58,438 | 62,414 | 56,366 | 52,045 | 50,792 | 49,567 | 51,382 | 50,594 | 51,560 |
| Pennsylvania | 53,933 | 54,857 | 65,147 | 68,625 | 58,214 | 51,463 | 49,020 | 46,462 | 45,573 | 46,821 | 50,725 |
| Washington | 51,371 | 49,757 | 51,986 | 53,730 | 47,762 | 49,044 | 50,472 | 50,184 | 55,015 | 57,341 | 56,565 |
| Illinois | 45,087 | 46,928 | 49,280 | 52,444 | 46,657 | 47,056 | 46,071 | 44,438 | 43,820 | 44,033 | 46,341 |
| New Jersey | 56,094 | 57,236 | 64,338 | 64,350 | 58,655 | 56,050 | 53,267 | 55,113 | 57,413 | 56,498 | 60,382 |
| Ohio | 34,939 | 36,178 | 37,387 | 37,482 | 34,030 | 33,013 | 32,579 | 30,549 | 30,691 | 31,644 | 32,313 |
| Maryland | 24,114 | 26,487 | 31,177 | 33,144 | 31,454 | 31,802 | 32,049 | 31,551 | 33,415 | 33,204 | 38,929 |
| Georgia | 36,257 | 39,342 | 42,307 | 43,919 | 38,377 | 38,188 | 37,666 | 37,226 | 37,901 | 37,196 | 39,453 |
| North Carolina | 38,341 | 36,461 | 41,172 | 46,637 | 43,254 | 36,814 | 38,272 | 44,154 | 43,027 | 44,031 | 46,470 |
| Colorado | 34,655 | 40,766 | 42,276 | 43,635 | 37,371 | 35,674 | 36,038 | 36,298 | 38,309 | 38,356 | 43,014 |
| Michigan | 32,553 | 31,542 | 34,622 | 36,979 | 31,684 | 26,270 | 25,849 | 23,702 | 23,805 | 23,410 | 24,194 |
| Minnesota | 19,224 | 20,426 | 21,592 | 24,297 | 23,254 | 22,871 | 23,298 | 21,925 | 20,513 | 21,169 | 21,526 |
| Arizona | 29,947 | 29,124 | 34,077 | 33,967 | 32,545 | 26,671 | 24,609 | 24,259 | 23,058 | 22,944 | 21,616 |
| Connecticut | 23,229 | 25,508 | 28,961 | 28,102 | 24,932 | 25,651 | 24,579 | 25,451 | 25,747 | 26,268 | 24,550 |
| Missouri | 19,190 | 19,894 | 20,769 | 23,090 | 22,613 | 21,984 | 21,087 | 19,440 | 19,263 | 18,951 | 20,799 |
| Other States | 247,909 | 256,244 | 273,342 | 325,512 | 321,051 | 354,741 | 356,313 | 378,502 | 382,180 | 412,589 | 385,195 |

**% change from previous year**

| State | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **5.9** | **6.5** | **6.4** | **-8.9** | **1.1** | **0.0** | **0.5** | **0.6** | **2.3** | **2.5** |
| California | 10.4 | 0.0 | -0.5 | -10.8 | 2.2 | 2.5 | -3.4 | 1.4 | 0.0 | 5.5 |
| Texas | 9.0 | 3.3 | 6.3 | -15.0 | 4.2 | 2.1 | 3.1 | -4.5 | 1.1 | 5.4 |
| New York | 5.8 | 8.3 | 0.7 | -11.1 | 0.9 | 0.1 | 0.6 | -1.8 | -0.3 | 11.5 |
| Florida | 6.2 | 7.5 | 9.6 | -10.4 | 3.8 | 0.6 | -2.3 | -0.1 | 0.6 | 5.5 |
| Virginia | 4.7 | 16.1 | 5.6 | -9.9 | 4.0 | -2.2 | -5.1 | -1.1 | -0.9 | 13.8 |
| Massachusetts | 17.6 | 2.2 | 6.8 | -9.7 | -7.7 | -2.4 | -2.4 | 3.7 | -1.5 | 1.9 |
| Pennsylvania | 1.7 | 18.8 | 5.3 | -15.2 | -11.6 | -4.7 | -5.2 | -1.9 | 2.7 | 8.3 |
| Washington | -3.1 | 4.5 | 3.4 | -11.1 | 2.7 | 2.9 | -0.6 | 9.6 | 4.2 | -1.4 |
| Illinois | 4.1 | 5.0 | 6.4 | -11.0 | 0.9 | -2.1 | -3.5 | -1.4 | 0.5 | 5.2 |
| New Jersey | 2.0 | 12.4 | 0.0 | -8.9 | -4.4 | -5.0 | 3.5 | 4.2 | -1.6 | 6.9 |
| Ohio | 3.5 | 3.3 | 0.3 | -9.2 | -3.0 | -1.3 | -6.2 | 0.5 | 3.1 | 2.1 |
| Maryland | 9.8 | 17.7 | 6.3 | -5.1 | 1.1 | 0.8 | -1.6 | 5.9 | -0.6 | 17.2 |
| Georgia | 8.5 | 7.5 | 3.8 | -12.6 | -0.5 | -1.4 | -1.2 | 1.8 | -1.9 | 6.1 |
| North Carolina | -4.9 | 12.9 | 13.3 | -7.3 | -14.9 | 4.0 | 15.4 | -2.6 | 2.3 | 5.5 |
| Colorado | 17.6 | 3.7 | 3.2 | -14.4 | -4.5 | 1.0 | 0.7 | 5.5 | 0.1 | 12.1 |
| Michigan | -3.1 | 9.8 | 6.8 | -14.3 | -17.1 | -1.6 | -8.3 | 0.4 | -1.7 | 3.3 |
| Minnesota | 6.3 | 5.7 | 12.5 | -4.3 | -1.6 | 1.9 | -5.9 | -6.4 | 3.2 | 1.7 |
| Arizona | -2.7 | 17.0 | -0.3 | -4.2 | -18.0 | -7.7 | -1.4 | -4.9 | -0.5 | -5.8 |
| Connecticut | 9.8 | 13.5 | -3.0 | -11.3 | 2.9 | -4.2 | 3.5 | 1.2 | 2.0 | -6.5 |
| Missouri | 3.7 | 4.4 | 11.2 | -2.1 | -2.8 | -4.1 | -7.8 | -0.9 | -1.6 | 9.7 |
| Other States | 3.4 | 6.7 | 19.1 | -1.4 | 10.5 | 0.4 | 6.2 | 1.0 | 8.0 | -6.6 |

1. Top 20 states by employment in 2009.
2. Figures converted from U.S. dollar data using an average annual exchange rate.

r Revised

p Preliminary

Source: BC Stats

## Table 7. British Columbia High Technology Sector Revenues,[1] 1999-2009

$ million

| INDUSTRY | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing** | **2,328** | **2,898** | **2,545** | **2,265** | **2,404** | **2,642** | **2,504** | **2,897** | **2,957** | **2,959** | **2,587** |
| **Services** | **9,072** | **9,529** | **9,629** | **10,775** | **11,704** | **12,546** | **14,410** | **14,854** | **16,400** | **16,526** | **16,265** |
| Motion picture production & post-production | 477 | 401 | 413 | 481 | 644 | 442 | 705 | 767 | 750 | 805 | 526 |
| Telecommunications | 4,888 | 5,104 | 4,779 | 5,299 | 5,713 | 5,706 | 6,148 | 5,952 | 6,165 | 5,850 | 6,287 |
| Engineering services | 1,154 | 1,142 | 1,439 | 1,415 | 1,513 | 1,565 | 1,983 | 2,412 | 2,923 | 2,917 | 2,512 |
| Software publishing | 632 | 711 | 816 | 818 | 798 | 1,165 | 1,186 | 1,277 | 1,344 | 1,447 | 1,507 |
| Other computer and related services | 1,587 | 1,786 | 1,702 | 1,794 | 2,115 | 2,537 | 2,941 | 3,147 | 3,426 | 3,445 | 3,366 |
| Other services | 333 | 385 | 480 | 969 | 920 | 1,133 | 1,448 | 1,298 | 1,792 | 2,061 | 2,066 |
| **High Technology Sector Total** | **11,212** | **12,286** | **12,065** | **12,970** | **14,174** | **15,188** | **16,914** | **17,751** | **19,357** | **19,485** | **18,852** |

% change from previous year

| INDUSTRY | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing** | **24.5** | **-12.2** | **-11.0** | **6.1** | **9.9** | **-5.2** | **15.7** | **2.1** | **0.1** | **-12.6** |
| **Services** | **5.0** | **1.0** | **11.9** | **8.6** | **7.2** | **14.9** | **3.1** | **10.4** | **0.8** | **-1.6** |
| Motion picture production & post-production | -15.9 | 2.8 | 16.4 | 34.0 | -31.4 | 59.6 | 8.7 | -2.2 | 7.4 | -34.6 |
| Telecommunications | 4.4 | -6.4 | 10.9 | 7.8 | -0.1 | 7.7 | -3.2 | 3.6 | -5.1 | 7.5 |
| Engineering services | -1.1 | 26.0 | -1.7 | 6.9 | 3.4 | 26.7 | 21.7 | 21.1 | -0.2 | -13.9 |
| Software publishing | 12.4 | 14.8 | 0.2 | -2.4 | 45.9 | 1.8 | 7.7 | 5.2 | 7.7 | 4.1 |
| Other computer and related services | 12.5 | -4.7 | 5.4 | 17.9 | 19.9 | 15.9 | 7.0 | 8.8 | 0.6 | -2.3 |
| Other services | 15.5 | 24.7 | 101.9 | -5.0 | 23.1 | 27.8 | -10.3 | 38.0 | 15.0 | 0.3 |
| **High Technology Sector Total** | **9.6** | **-1.8** | **7.5** | **9.3** | **7.2** | **11.4** | **4.9** | **9.0** | **0.7** | **-3.2** |

1. Note that revenues for the service industries are collected on a company rather than an establishment basis. As a result, revenues for those industries represent the entire Canadian earnings of companies headquartered in British Columbia. Totals are calculated using unrounded data.

[r] Revised
[p] Preliminary

Source: BC Stats and Statistics Canada

## Table 8. High Technology Sector Revenues, by Province and the U.S., 1999-2009

Cdn $ million

| Region | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Canada | 129,160 | 150,011 | 148,234 | 146,445 | 147,018 | 152,992 | 161,339 | 170,536 | 184,468 | 197,329 | 200,337 |
| British Columbia | 11,212 | 12,286 | 12,065 | 12,970 | 14,174 | 15,188 | 16,914 | 17,751 | 19,357 | 19,485 | 18,852 |
| Alberta | 11,799 | 13,918 | 15,000 | 14,280 | 14,767 | 15,984 | 17,267 | 19,848 | 21,991 | 22,775 | 23,232 |
| Manitoba | 2,660 | 2,942 | 3,239 | 3,246 | 3,826 | 3,803 | 3,820 | 4,077 | 3,933 | 4,881 | 5,124 |
| Ontario | 57,111 | 65,948 | 67,156 | 64,855 | 62,219 | 67,760 | 70,004 | 74,668 | 78,997 | 84,300 | 87,102 |
| Quebec | 39,767 | 47,743 | 43,614 | 42,915 | 42,801 | 42,631 | 43,844 | 44,740 | 48,259 | 51,631 | 50,872 |
| United States[1] | 2,575,813 | 2,800,495 | 2,885,090 | 2,831,446 | 2,538,818 | 2,476,377 | 2,458,113 | 2,454,426 | 2,525,557 | 2,590,637 | 2,718,186 |

% change from previous year

| Region | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Canada | 16.1 | -1.2 | -1.2 | 0.4 | 4.1 | 5.5 | 5.7 | 8.2 | 7.0 | 1.5 |
| British Columbia | 9.6 | -1.8 | 7.5 | 9.3 | 7.2 | 11.4 | 4.9 | 9.0 | 0.7 | -3.2 |
| Alberta | 18.0 | 7.8 | -4.8 | 3.4 | 8.2 | 8.0 | 14.9 | 10.8 | 3.6 | 2.0 |
| Manitoba | 10.6 | 10.1 | 0.2 | 17.9 | -0.6 | 0.4 | 6.7 | -3.5 | 24.1 | 5.0 |
| Ontario | 15.5 | 1.8 | -3.4 | -4.1 | 8.9 | 3.3 | 6.7 | 5.8 | 6.7 | 3.3 |
| Quebec | 20.1 | -8.6 | -1.6 | -0.3 | -0.4 | 2.8 | 2.0 | 7.9 | 7.0 | -1.5 |
| United States | 8.7 | 3.0 | -1.9 | -10.3 | -2.5 | -0.7 | -0.1 | 2.9 | 2.6 | 4.9 |

1. Figures for the United States were converted from U.S. dollar data using an average annual exchange rate.

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 9. High Technology Sector Revenues for Selected States,[1] 1999-2009

**Value ($Cdn million)[2]**

| State | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **2,575,813** | **2,800,495** | **2,885,090** | **2,831,446** | **2,538,818** | **2,476,377** | **2,458,113** | **2,454,426** | **2,525,557** | **2,590,637** | **2,718,186** |
| California | 510,798 | 564,301 | 539,841 | 512,504 | 454,872 | 445,462 | 433,652 | 428,953 | 454,678 | 472,942 | 498,897 |
| Texas | 202,739 | 246,440 | 234,986 | 228,351 | 201,973 | 199,290 | 200,474 | 205,876 | 210,618 | 219,839 | 221,365 |
| New York | 139,620 | 165,757 | 165,303 | 160,334 | 145,868 | 143,865 | 144,801 | 146,342 | 146,598 | 150,969 | 168,413 |
| Florida | 92,971 | 106,553 | 109,844 | 109,724 | 100,995 | 101,592 | 99,242 | 96,462 | 99,910 | 101,656 | 105,730 |
| Virginia | 85,925 | 105,077 | 112,597 | 108,607 | 98,904 | 100,789 | 93,196 | 86,935 | 100,858 | 97,886 | 111,618 |
| Massachusetts | 99,081 | 122,235 | 115,308 | 115,909 | 103,057 | 100,629 | 94,289 | 96,776 | 101,009 | 104,387 | 108,000 |
| Pennsylvania | 94,081 | 109,695 | 119,521 | 118,881 | 104,314 | 98,052 | 95,786 | 94,096 | 87,600 | 93,362 | 99,623 |
| Washington | 82,848 | 88,097 | 102,629 | 108,057 | 100,366 | 85,976 | 102,197 | 108,204 | 104,663 | 110,980 | 117,220 |
| Illinois | 89,475 | 107,529 | 101,567 | 96,143 | 84,737 | 88,167 | 82,338 | 81,277 | 85,499 | 90,738 | 92,573 |
| New Jersey | 89,901 | 100,970 | 115,297 | 117,841 | 102,384 | 96,457 | 94,283 | 99,692 | 103,122 | 105,223 | 110,333 |
| Ohio | 68,012 | 77,800 | 80,085 | 73,535 | 64,485 | 61,990 | 62,686 | 61,258 | 63,913 | 64,831 | 67,192 |
| Maryland | 92,526 | 42,112 | 59,233 | 57,603 | 53,730 | 52,302 | 52,742 | 52,038 | 56,620 | 58,966 | 66,930 |
| Georgia | 70,485 | 81,613 | 82,484 | 85,044 | 73,895 | 73,150 | 72,516 | 70,258 | 72,239 | 73,763 | 77,896 |
| North Carolina | 77,170 | 79,234 | 79,881 | 77,833 | 72,566 | 67,683 | 74,807 | 79,539 | 77,621 | 78,424 | 84,399 |
| Colorado | 61,737 | 73,215 | 65,822 | 70,087 | 62,221 | 56,496 | 58,340 | 61,083 | 64,182 | 65,252 | 71,861 |
| Michigan | 50,025 | 55,387 | 57,472 | 55,383 | 48,626 | 42,734 | 42,399 | 39,997 | 42,878 | 43,130 | 44,633 |
| Minnesota | 40,810 | 47,542 | 49,226 | 48,906 | 44,224 | 41,964 | 43,059 | 41,683 | 39,029 | 41,260 | 41,231 |
| Arizona | 56,808 | 60,320 | 57,250 | 58,556 | 56,671 | 48,846 | 43,647 | 47,541 | 47,601 | 47,931 | 47,490 |
| Connecticut | 41,921 | 47,215 | 54,424 | 50,708 | 43,868 | 42,147 | 42,259 | 43,650 | 49,499 | 49,418 | 49,534 |
| Missouri | 37,564 | 41,612 | 43,865 | 46,860 | 44,413 | 42,770 | 40,215 | 37,858 | 38,149 | 39,413 | 41,882 |
| Other States | 491,315 | 477,792 | 538,455 | 530,579 | 476,647 | 486,017 | 485,184 | 474,908 | 479,273 | 480,268 | 491,366 |

**% change from previous year**

| State | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **8.7** | **3.0** | **-1.9** | **-10.3** | **-2.5** | **-0.7** | **-0.1** | **2.9** | **2.6** | **4.9** |
| California | 10.5 | -4.3 | -5.1 | -11.2 | -2.1 | -2.7 | -1.1 | 6.0 | 4.0 | 5.5 |
| Texas | 21.6 | -4.6 | -2.8 | -11.6 | -1.3 | 0.6 | 2.7 | 2.3 | 4.4 | 0.7 |
| New York | 18.7 | -0.3 | -3.0 | -9.0 | -1.4 | 0.7 | 1.1 | 0.2 | 3.0 | 11.6 |
| Florida | 14.6 | 3.1 | -0.1 | -8.0 | 0.6 | -2.3 | -2.8 | 3.6 | 1.7 | 4.0 |
| Virginia | 22.3 | 7.2 | -3.5 | -8.9 | 1.9 | -7.5 | -6.7 | 16.0 | -2.9 | 14.0 |
| Massachusetts | 23.4 | -5.7 | 0.5 | -11.1 | -2.4 | -6.3 | 2.6 | 4.4 | 3.3 | 3.5 |
| Pennsylvania | 16.6 | 9.0 | -0.5 | -12.3 | -6.0 | -2.3 | -1.8 | -6.9 | 6.6 | 6.7 |
| Washington | 6.3 | 16.5 | 5.3 | -7.1 | -14.3 | 18.9 | 5.9 | -3.3 | 6.0 | 5.6 |
| Illinois | 20.2 | -5.5 | -5.3 | -11.9 | 4.0 | -6.6 | -1.3 | 5.2 | 6.1 | 2.0 |
| New Jersey | 12.3 | 14.2 | 2.2 | -13.1 | -5.8 | -2.3 | 5.7 | 3.4 | 2.0 | 4.9 |
| Ohio | 14.4 | 2.9 | -8.2 | -12.3 | -3.9 | 1.1 | -2.3 | 4.3 | 1.4 | 3.6 |
| Maryland | -54.5 | 40.7 | -2.8 | -6.7 | -2.7 | 0.8 | -1.3 | 8.8 | 4.1 | 13.5 |
| Georgia | 15.8 | 1.1 | 3.1 | -13.1 | -1.0 | -0.9 | -3.1 | 2.8 | 2.1 | 5.6 |
| North Carolina | 2.7 | 0.8 | -2.6 | -6.8 | -6.7 | 10.5 | 6.3 | -2.4 | 1.0 | 7.6 |
| Colorado | 18.6 | -10.1 | 6.5 | -11.2 | -9.2 | 3.3 | 4.7 | 5.1 | 1.7 | 10.1 |
| Michigan | 10.7 | 3.8 | -3.6 | -12.2 | -12.1 | -0.8 | -5.7 | 7.2 | 0.6 | 3.5 |
| Minnesota | 16.5 | 3.5 | -0.6 | -9.6 | -5.1 | 2.6 | -3.2 | -6.4 | 5.7 | -0.1 |
| Arizona | 6.2 | -5.1 | 2.3 | -3.2 | -13.8 | -10.6 | 8.9 | 0.1 | 0.7 | -0.9 |
| Connecticut | 12.6 | 15.3 | -6.8 | -13.5 | -3.9 | 0.3 | 3.3 | 13.4 | -0.2 | 0.2 |
| Missouri | 10.8 | 5.4 | 6.8 | -5.2 | -3.7 | -6.0 | -5.9 | 0.8 | 3.3 | 6.3 |
| Other States | -2.8 | 12.7 | -1.5 | -10.2 | 2.0 | -0.2 | -2.1 | 0.9 | 0.2 | 2.3 |

1. Top 20 states by employment in 2009.
2. Figures converted from U.S. dollar data using an average annual exchange rate.

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 10. British Columbia High Technology Sector Employment,[1] 1999-2009

| INDUSTRY | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing Industries** | **14,280** | **15,700** | **15,320** | **13,410** | **13,110** | **13,190** | **12,830** | **14,650** | **15,610** | **14,750** | **13,210** |
| **Service Industries** | **46,870** | **50,230** | **54,060** | **53,190** | **55,440** | **55,480** | **58,600** | **61,610** | **66,440** | **70,830** | **70,460** |
| Motion picture production & post-production | 3,740 | 3,090 | 3,240 | 4,860 | 4,010 | 4,980 | 5,320 | 5,610 | 7,130 | 6,890 | 6,140 |
| Telecommunications | 12,400 | 12,800 | 12,010 | 9,880 | 10,060 | 9,540 | 9,030 | 8,160 | 6,880 | 8,820 | 11,990 |
| Engineering services | 9,900 | 9,300 | 10,100 | 9,300 | 10,200 | 10,270 | 12,450 | 13,180 | 13,910 | 15,200 | 13,930 |
| Software publishing | 2,540 | 3,200 | 3,670 | 4,070 | 4,730 | 5,490 | 7,090 | 7,390 | 8,160 | 8,490 | 8,040 |
| Other computer and related services | 11,830 | 14,910 | 16,470 | 16,530 | 17,980 | 16,580 | 16,440 | 17,420 | 18,140 | 19,030 | 18,450 |
| Other services | 6,460 | 6,930 | 8,570 | 8,560 | 8,470 | 8,620 | 8,270 | 9,840 | 12,220 | 12,400 | 11,900 |
| **High Technology Sector Total** | **61,140** | **65,940** | **69,380** | **66,600** | **68,550** | **68,670** | **71,430** | **76,270** | **82,060** | **85,580** | **83,670** |
| **BC Industrial Aggregate** | **1,512,490** | **1,572,710** | **1,607,360** | **1,611,270** | **1,653,940** | **1,694,420** | **1,750,580** | **1,822,960** | **1,891,420** | **1,944,090** | **1,888,500** |

| | % change from previous year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| INDUSTRY | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| **Manufacturing Industries** | **10.0** | **-2.4** | **-12.5** | **-2.2** | **0.6** | **-2.7** | **14.2** | **6.6** | **-5.5** | **-10.4** |
| **Service Industries** | **7.2** | **7.6** | **-1.6** | **4.2** | **0.1** | **5.6** | **5.1** | **7.8** | **6.6** | **-0.5** |
| Motion picture production & post-production | -17.3 | 4.6 | 50.1 | -17.5 | 24.2 | 6.8 | 5.5 | 27.1 | -3.3 | -11.0 |
| Telecommunications | 3.2 | -6.1 | -17.8 | 1.8 | -5.1 | -5.4 | -9.6 | -15.6 | 28.1 | 36.0 |
| Engineering services | -6.1 | 8.6 | -7.9 | 9.7 | 0.7 | 21.3 | 5.8 | 5.5 | 9.3 | -8.4 |
| Software publishing | 26.1 | 14.9 | 10.7 | 16.3 | 16.0 | 29.2 | 4.3 | 10.3 | 4.1 | -5.3 |
| Other computer and related services | 26.0 | 10.5 | 0.3 | 8.8 | -7.8 | -0.9 | 6.0 | 4.1 | 4.9 | -3.0 |
| Other services | 7.4 | 23.6 | -0.1 | -1.1 | 1.9 | -4.1 | 19.1 | 24.1 | 1.5 | -4.0 |
| **High Technology Sector Total** | **7.8** | **5.2** | **-4.0** | **2.9** | **0.2** | **4.0** | **6.8** | **7.6** | **4.3** | **-2.2** |
| **BC Industrial Aggregate** | **4.0** | **2.2** | **0.2** | **2.6** | **2.4** | **3.3** | **4.1** | **3.8** | **2.8** | **-2.9** |

1. Totals and percent changes are calculated using unrounded data.

[r] Revised

[p] Preliminary

Source: BC Stats and Statistics Canada

## Table 11. British Columbia Employment by Industry,[1] 1999-2009

**Persons (thousands)**

| | 1999 | 2000 | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Goods Producing Industries** | **301.8** | **314.7** | **295.2** | **288.3** | **283.4** | **291.8** | **302.7** | **318.2** | **328.9** | **328.7** | **289.3** |
| Agriculture and Related | na | na | na | na | na | na | na | na | na | na | na |
| Fishing and Related | na | na | na | na | na | na | na | na | na | na | na |
| Forestry and Related | 76.8 | 80.5 | 70.0 | 65.3 | 66.7 | 67.5 | 64.7 | 61.4 | 60.6 | 54.3 | 42.9 |
| *Logging and Forestry* | *17.8* | *18.3* | *17.4* | *17.0* | *17.1* | *17.8* | *16.5* | *15.0* | *14.7* | *12.4* | *9.5* |
| *Paper and Allied Products* | *17.8* | *18.8* | *15.0* | *11.6* | *13.6* | *13.2* | *12.3* | *12.2* | *11.9* | *10.7* | *8.7* |
| *Wood Manufacturing* | *41.2* | *43.4* | *37.6* | *36.7* | *36.0* | *36.5* | *35.9* | *34.2* | *33.9* | *31.1* | *24.8* |
| Mining and Oil and Gas Extraction | 10.7 | 10.6 | 10.5 | 10.6 | 10.6 | 11.7 | 13.3 | 14.8 | 16.2 | 18.3 | 13.7 |
| Other Manufacturing | 91.3 | 98.8 | 93.5 | 90.3 | 87.9 | 88.5 | 90.9 | 98.8 | 98.1 | 94.8 | 79.7 |
| Construction | 72.6 | 74.3 | 73.7 | 76.5 | 79.4 | 87.5 | 96.0 | 107.9 | 119.0 | 126.5 | 114.4 |
| Utilities | 9.1 | 9.4 | 8.7 | 7.4 | 7.9 | 7.9 | 9.2 | 9.3 | 8.9 | 9.2 | 10.0 |
| **Service Producing Industries** | **1,200.8** | **1,251.5** | **1,300.9** | **1,314.2** | **1,356.4** | **1,378.7** | **1,410.9** | **1,474.0** | **1,530.7** | **1,580.2** | **1,557.0** |
| Retail and Wholesale Trade | 258.5 | 271.1 | 286.3 | 293.3 | 307.7 | 314.7 | 323.9 | 336.5 | 352.3 | 358.7 | 343.6 |
| Transportation and Warehousing | 84.5 | 84.5 | 92.0 | 90.8 | 92.0 | 93.5 | 94.8 | 97.8 | 100.3 | 101.1 | 97.2 |
| Information and Culture | 34.5 | 36.3 | 35.8 | 33.7 | 33.7 | 33.5 | 35.6 | 35.9 | 38.6 | 39.7 | 40.6 |
| Finance, Insurance and Real Estate | na | na | na | 99.2 | 97.9 | 98.2 | 101.2 | 106.2 | 109.6 | 115.0 | 110.7 |
| Professional, Scientific and Technical | 74.3 | 82.0 | 84.9 | 81.3 | 83.6 | 83.8 | 86.1 | 92.4 | 97.2 | 103.4 | 101.7 |
| Educational | 123.6 | 127.7 | 124.9 | 126.3 | 124.7 | 126.8 | 129.0 | 134.7 | 138.5 | 139.1 | 137.9 |
| Health and Social | 167.9 | 174.5 | 173.4 | 177.5 | 183.9 | 178.7 | 179.9 | 188.7 | 193.4 | 199.3 | 207.6 |
| Arts, Entertainment and Recreation | 24.7 | 26.5 | 29.6 | 30.0 | 30.9 | 33.1 | 33.3 | 35.5 | 36.5 | 35.6 | 37.7 |
| Accommodation, and Food | 139.3 | 144.8 | 149.5 | 151.6 | 155.7 | 157.3 | 161.8 | 170.3 | 176.9 | 185.3 | 184.2 |
| Public Administration | 74.7 | 74.1 | 92.1 | 93.5 | 103.7 | 106.6 | 106.9 | 109.8 | 113.2 | 120.0 | 122.4 |
| Other Services | 120.8 | 128.5 | 133.0 | 137.0 | 142.5 | 152.4 | 158.5 | 166.1 | 174.2 | 182.9 | 173.3 |
| **BC Industrial Aggregate** | **1,512.5** | **1,572.7** | **1,607.4** | **1,611.3** | **1,653.9** | **1,694.4** | **1,750.6** | **1,823.0** | **1,891.4** | **1,944.1** | **1,888.5** |
| **High Technology Sector Total** | **61.1** | **65.9** | **69.4** | **66.6** | **68.6** | **68.7** | **71.4** | **76.3** | **82.1** | **85.6** | **83.7** |

**% change from previous year**

| | 2000 | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Goods Producing Industries** | **4.3** | **-6.2** | **-2.3** | **-1.7** | **3.0** | **3.7** | **5.1** | **3.3** | **-0.1** | **-12.0** |
| Agriculture and Related | na | na | na | na | na | na | na | na | na | na |
| Fishing and Related | na | na | na | na | na | na | na | na | na | na |
| Forestry and Related | 4.8 | -13.0 | -6.6 | 2.1 | 1.2 | -4.1 | -5.1 | -1.3 | -10.4 | -20.9 |
| *Logging and Forestry* | *2.9* | *-5.0* | *-2.1* | *0.5* | *3.9* | *-7.0* | *-9.5* | *-1.4* | *-15.8* | *-23.6* |
| *Paper and Allied Products* | *6.0* | *-20.2* | *-22.8* | *17.4* | *-2.9* | *-7.2* | *-0.2* | *-2.5* | *-10.1* | *-19.2* |
| *Wood Manufacturing* | *5.1* | *-13.3* | *-2.3* | *-2.0* | *1.4* | *-1.6* | *-4.8* | *-0.8* | *-8.3* | *-20.4* |
| Mining and Oil and Gas Extraction | -0.4 | -0.8 | 0.5 | -0.2 | 10.4 | 13.8 | 11.6 | 9.6 | 12.5 | -25.0 |
| Other Manufacturing | 8.2 | -5.4 | -3.4 | -2.7 | 0.6 | 2.7 | 8.7 | -0.7 | -3.4 | -15.9 |
| Construction | 2.3 | -0.9 | 3.9 | 3.8 | 10.2 | 9.8 | 12.3 | 10.3 | 6.3 | -9.5 |
| Utilities | 2.7 | -6.5 | -14.9 | 5.5 | 1.1 | 15.5 | 1.9 | -4.6 | 3.6 | 8.8 |
| **Service Producing Industries** | **4.2** | **4.0** | **1.0** | **3.2** | **1.6** | **2.3** | **4.5** | **3.8** | **3.2** | **-1.5** |
| Retail and Wholesale Trade | 4.9 | 5.6 | 2.4 | 4.9 | 2.3 | 2.9 | 3.9 | 4.7 | 1.8 | -4.2 |
| Transportation and Warehousing | -0.1 | 8.8 | -1.2 | 1.3 | 1.6 | 1.4 | 3.2 | 2.5 | 0.8 | -3.9 |
| Information and Culture | 5.2 | -1.3 | -6.1 | 0.1 | -0.4 | 6.0 | 1.1 | 7.3 | 3.1 | 2.2 |
| Finance, Insurance and Real Estate | na | na | na | -1.2 | 0.3 | 3.0 | 5.0 | 3.2 | 4.9 | -3.7 |
| Professional, Scientific and Technical | 10.3 | 3.6 | -4.2 | 2.8 | 0.2 | 2.7 | 7.4 | 5.1 | 6.5 | -1.7 |
| Educational | 3.3 | -2.2 | 1.1 | -1.3 | 1.7 | 1.7 | 4.4 | 2.8 | 0.4 | -0.8 |
| Health and Social | 3.9 | -0.6 | 2.3 | 3.6 | -2.9 | 0.7 | 4.9 | 2.5 | 3.1 | 4.2 |
| Arts, Entertainment and Recreation | 7.0 | 11.8 | 1.4 | 3.0 | 7.1 | 0.5 | 6.8 | 2.8 | -2.5 | 6.0 |
| Accommodation, and Food | 4.0 | 3.2 | 1.4 | 2.7 | 1.0 | 2.8 | 5.3 | 3.9 | 4.8 | -0.6 |
| Public Administration | -0.9 | 24.3 | 1.5 | 10.9 | 2.8 | 0.3 | 2.7 | 3.1 | 6.0 | 2.0 |
| Other Services | 6.4 | 3.5 | 3.0 | 4.0 | 7.0 | 4.0 | 4.8 | 4.9 | 4.9 | -5.2 |
| **BC Industrial Aggregate** | **4.0** | **2.2** | **0.2** | **2.6** | **2.4** | **3.3** | **4.1** | **3.8** | **2.8** | **-2.9** |
| **High Technology Sector Total** | **7.9** | **5.2** | **-4.0** | **2.9** | **0.2** | **4.0** | **6.8** | **7.6** | **4.3** | **-2.2** |

1. Totals and percent changes are calculated using unrounded data.

[r] Revised
na: Data not available for specific industry.

Source: Statistics Canada and BC Stats

## Table 12. High Technology Sector Employment, by Province, 1999-2009

| Province | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Canada | 650,710 | 699,030 | 713,490 | 701,010 | 681,480 | 685,350 | 704,150 | 737,130 | 757,090 | 766,930 | 748,710 |
| British Columbia | 61,140 | 65,940 | 69,380 | 66,600 | 68,550 | 68,670 | 71,430 | 76,270 | 82,060 | 85,580 | 83,670 |
| Alberta | 61,800 | 64,210 | 69,900 | 66,890 | 63,320 | 65,320 | 69,870 | 78,890 | 79,980 | 83,880 | 77,660 |
| Manitoba | 17,520 | 18,820 | 18,630 | 17,850 | 16,910 | 17,240 | 18,090 | 17,310 | 17,840 | 18,480 | 17,710 |
| Ontario | 276,490 | 299,900 | 300,240 | 298,400 | 288,440 | 288,760 | 294,890 | 308,980 | 317,660 | 325,140 | 324,620 |
| Quebec | 186,650 | 200,670 | 207,570 | 207,140 | 203,260 | 204,920 | 205,460 | 207,120 | 211,700 | 206,150 | 196,200 |

**% change from previous year**

| Province | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Canada | 7.4 | 2.1 | -1.7 | -2.8 | 0.6 | 2.7 | 4.7 | 2.7 | 1.3 | -2.4 |
| British Columbia | 7.8 | 5.2 | -4.0 | 2.9 | 0.2 | 4.0 | 6.8 | 7.6 | 4.3 | -2.2 |
| Alberta | 3.9 | 8.9 | -4.3 | -5.3 | 3.2 | 7.0 | 12.9 | 1.4 | 4.9 | -7.4 |
| Manitoba | 7.5 | -1.0 | -4.2 | -5.3 | 2.0 | 4.9 | -4.3 | 3.1 | 3.6 | -4.2 |
| Ontario | 8.5 | 0.1 | -0.6 | -3.3 | 0.1 | 2.1 | 4.8 | 2.8 | 2.4 | -0.2 |
| Quebec | 7.5 | 3.4 | -0.2 | -1.9 | 0.8 | 0.3 | 0.8 | 2.2 | -2.6 | -4.8 |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 13. High Technology Sector Employment for Top 20 U.S. States, 1999-2009

| State | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **8,232,580** | **8,659,890** | **8,590,420** | **7,932,740** | **7,534,600** | **7,516,620** | **7,644,860** | **7,846,160** | **7,981,840** | **8,096,750** | **7,747,490** |
| California | 1,402,470 | 1,522,770 | 1,501,260 | 1,377,790 | 1,297,570 | 1,314,200 | 1,334,520 | 1,372,650 | 1,383,040 | 1,400,860 | 1,330,600 |
| Texas | 624,280 | 665,090 | 655,550 | 592,950 | 565,670 | 556,330 | 570,590 | 590,530 | 609,590 | 624,530 | 592,200 |
| New York | 468,830 | 500,730 | 495,770 | 461,550 | 431,060 | 425,690 | 429,170 | 433,320 | 437,520 | 442,800 | 430,120 |
| Florida | 349,270 | 369,130 | 372,210 | 350,200 | 337,670 | 345,780 | 360,270 | 367,130 | 365,460 | 367,660 | 347,150 |
| Virginia | 278,910 | 307,700 | 307,500 | 285,530 | 278,110 | 291,930 | 302,120 | 312,170 | 317,650 | 324,380 | 321,300 |
| Massachusetts | 329,980 | 357,270 | 358,790 | 317,740 | 295,430 | 288,400 | 290,210 | 296,360 | 302,690 | 311,090 | 302,460 |
| Pennsylvania | 322,840 | 335,870 | 335,370 | 310,700 | 294,520 | 286,880 | 288,500 | 297,480 | 298,540 | 303,950 | 293,840 |
| Washington | 265,750 | 274,430 | 276,180 | 251,990 | 235,180 | 233,820 | 244,000 | 259,610 | 279,460 | 292,280 | 287,680 |
| Illinois | 329,620 | 341,680 | 335,940 | 305,560 | 285,040 | 277,230 | 278,610 | 282,310 | 283,830 | 287,150 | 271,810 |
| New Jersey | 308,720 | 318,730 | 319,800 | 292,300 | 276,380 | 271,130 | 271,970 | 281,500 | 287,790 | 281,690 | 265,190 |
| Ohio | 249,450 | 254,280 | 248,970 | 231,420 | 219,910 | 210,970 | 213,150 | 216,580 | 220,940 | 227,060 | 217,470 |
| Maryland | 179,530 | 194,240 | 195,160 | 190,660 | 189,000 | 192,950 | 198,450 | 202,750 | 207,610 | 211,440 | 211,470 |
| Georgia | 231,980 | 245,560 | 239,240 | 221,180 | 215,700 | 211,410 | 211,620 | 214,540 | 218,250 | 218,000 | 210,220 |
| North Carolina | 215,050 | 225,780 | 227,470 | 204,940 | 193,480 | 193,420 | 202,210 | 206,270 | 212,640 | 216,310 | 208,070 |
| Colorado | 221,970 | 238,680 | 237,620 | 208,550 | 191,620 | 188,860 | 188,210 | 188,330 | 191,680 | 197,000 | 191,800 |
| Michigan | 247,040 | 255,970 | 247,090 | 234,580 | 225,010 | 216,740 | 216,670 | 214,240 | 211,970 | 208,020 | 187,060 |
| Minnesota | 177,890 | 181,350 | 175,990 | 165,170 | 156,110 | 156,810 | 160,090 | 162,510 | 164,880 | 166,360 | 155,980 |
| Arizona | 154,990 | 168,990 | 168,280 | 153,660 | 145,400 | 146,380 | 148,380 | 154,760 | 155,050 | 155,050 | 146,320 |
| Connecticut | 146,570 | 150,760 | 149,780 | 140,610 | 132,950 | 132,040 | 130,670 | 131,810 | 135,170 | 136,030 | 129,220 |
| Missouri | 180,510 | 136,840 | 130,160 | 121,660 | 119,730 | 122,720 | 124,270 | 127,640 | 129,790 | 132,080 | 129,140 |
| Other States | 1,546,940 | 1,614,060 | 1,612,290 | 1,513,990 | 1,449,060 | 1,452,960 | 1,481,190 | 1,533,650 | 1,568,310 | 1,593,010 | 1,518,410 |

**% change from previous year[1]**

| State | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **5.2** | **-0.8** | **-7.7** | **-5.0** | **-0.2** | **1.7** | **2.6** | **1.7** | **1.4** | **-4.3** |
| California | 8.6 | -1.4 | -8.2 | -5.8 | 1.3 | 1.5 | 2.9 | 0.8 | 1.3 | -5.0 |
| Texas | 6.5 | -1.4 | -9.5 | -4.6 | -1.7 | 2.6 | 3.5 | 3.2 | 2.5 | -5.2 |
| New York | 6.8 | -1.0 | -6.9 | -6.6 | -1.2 | 0.8 | 1.0 | 1.0 | 1.2 | -2.9 |
| Florida | 5.7 | 0.8 | -5.9 | -3.6 | 2.4 | 4.2 | 1.9 | -0.5 | 0.6 | -5.6 |
| Virginia | 10.3 | -0.1 | -7.1 | -2.6 | 5.0 | 3.5 | 3.3 | 1.8 | 2.1 | -1.0 |
| Massachusetts | 8.3 | 0.4 | -11.4 | -7.0 | -2.4 | 0.6 | 2.1 | 2.1 | 2.8 | -2.8 |
| Pennsylvania | 4.0 | -0.1 | -7.4 | -5.2 | -2.6 | 0.6 | 3.1 | 0.4 | 1.8 | -3.3 |
| Washington | 3.3 | 0.6 | -8.8 | -6.7 | -0.6 | 4.4 | 6.4 | 7.6 | 4.6 | -1.6 |
| Illinois | 3.7 | -1.7 | -9.0 | -6.7 | -2.7 | 0.5 | 1.3 | 0.5 | 1.2 | -5.3 |
| New Jersey | 3.2 | 0.3 | -8.6 | -5.4 | -1.9 | 0.3 | 3.5 | 2.2 | -2.1 | -5.9 |
| Ohio | 1.9 | -2.1 | -7.0 | -5.0 | -4.1 | 1.0 | 1.6 | 2.0 | 2.8 | -4.2 |
| Maryland | 8.2 | 0.5 | -2.3 | -0.9 | 2.1 | 2.9 | 2.2 | 2.4 | 1.8 | 0.0 |
| Georgia | 5.9 | -2.6 | -7.5 | -2.5 | -2.0 | 0.1 | 1.4 | 1.7 | -0.1 | -3.6 |
| North Carolina | 5.0 | 0.8 | -9.9 | -5.6 | 0.0 | 4.5 | 2.0 | 3.1 | 1.7 | -3.8 |
| Colorado | 7.5 | -0.4 | -12.2 | -8.1 | -1.4 | -0.3 | 0.1 | 1.8 | 2.8 | -2.6 |
| Michigan | 3.6 | -3.5 | -5.1 | -4.1 | -3.7 | 0.0 | -1.1 | -1.1 | -1.9 | -10.1 |
| Minnesota | 1.9 | -3.0 | -6.1 | -5.5 | 0.4 | 2.1 | 1.5 | 1.5 | 0.9 | -6.2 |
| Arizona | 9.0 | -0.4 | -8.7 | -5.4 | 0.7 | 1.4 | 4.3 | 0.2 | 0.0 | -5.6 |
| Connecticut | 2.9 | -0.7 | -6.1 | -5.4 | -0.7 | -1.0 | 0.9 | 2.5 | 0.6 | -5.0 |
| Missouri | -24.2 | -4.9 | -6.5 | -1.6 | 2.5 | 1.3 | 2.7 | 1.7 | 1.8 | -2.2 |
| Other States | 4.3 | -0.1 | -6.1 | -4.3 | 0.3 | 1.9 | 3.5 | 2.3 | 1.6 | -4.7 |

1. Percent changes are calculated using unrounded data.

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 14. British Columbia High Technology Sector Wages and Salaries, 1999-2009

Value ($ million)

| INDUSTRY | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing Industries** | **643.5** | **717.1** | **721.7** | **651.0** | **672.7** | **680.6** | **679.6** | **810.0** | **824.1** | **799.5** | **729.6** |
| **Service Industries** | **2,247.0** | **2,575.8** | **2,640.7** | **2,594.7** | **2,695.9** | **2,820.1** | **3,424.4** | **3,895.9** | **4,160.7** | **4,466.5** | **4,611.9** |
| Motion picture production & post-production | 142.3 | 156.1 | 167.0 | 153.6 | 156.2 | 136.5 | 186.2 | 206.9 | 225.0 | 260.3 | 156.8 |
| Telecommunications | 571.5 | 586.4 | 523.9 | 444.1 | 444.7 | 470.3 | 492.5 | 427.7 | 389.6 | 508.2 | 803.8 |
| Engineering services | 495.7 | 529.2 | 650.7 | 566.7 | 617.0 | 618.9 | 838.0 | 944.3 | 1,062.2 | 1,141.9 | 1,084.8 |
| Software publishing | 121.7 | 159.0 | 197.8 | 221.9 | 284.2 | 324.8 | 424.8 | 486.3 | 564.7 | 594.1 | 618.8 |
| Other computer and related services | 621.3 | 817.9 | 671.9 | 777.9 | 768.0 | 819.2 | 1,016.4 | 1,260.2 | 1,190.1 | 1,230.2 | 1,211.8 |
| Other services | 294.5 | 327.2 | 429.3 | 430.4 | 425.9 | 450.3 | 466.5 | 570.5 | 729.2 | 731.8 | 736.0 |
| **High Technology Sector Total** | **2,890.6** | **3,292.9** | **3,362.4** | **3,245.7** | **3,368.6** | **3,500.7** | **4,104.0** | **4,705.9** | **4,984.8** | **5,266.0** | **5,341.5** |
| **BC Industrial Aggregate** | **51,326.5** | **54,340.9** | **55,151.7** | **56,369.0** | **59,204.6** | **61,727.0** | **66,096.9** | **70,841.2** | **75,920.7** | **80,184.6** | **78,491.9** |

% change from previous year

| INDUSTRY | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing Industries** | **11.4** | **0.6** | **-9.8** | **3.3** | **1.2** | **-0.1** | **19.2** | **1.7** | **-3.0** | **-8.7** |
| **Service Industries** | **14.6** | **2.5** | **-1.7** | **3.9** | **4.6** | **21.4** | **13.8** | **6.8** | **7.3** | **3.3** |
| Motion picture production & post-production | 9.7 | 7.0 | -8.0 | 1.7 | -12.6 | 36.4 | 11.1 | 8.7 | 15.7 | -39.8 |
| Telecommunications | 2.6 | -10.7 | -15.2 | 0.1 | 5.8 | 4.7 | -13.2 | -8.9 | 30.4 | 58.2 |
| Engineering services | 6.8 | 23.0 | -12.9 | 8.9 | 0.3 | 35.4 | 12.7 | 12.5 | 7.5 | -5.0 |
| Software publishing | 30.6 | 24.4 | 12.2 | 28.1 | 14.3 | 30.8 | 14.5 | 16.1 | 5.2 | 4.2 |
| Other computer and related services | 31.6 | -17.9 | 15.8 | -1.3 | 6.7 | 24.1 | 24.0 | -5.6 | 3.4 | -1.5 |
| Other services | 11.1 | 31.2 | 0.3 | -1.0 | 5.7 | 3.6 | 22.3 | 27.8 | 0.4 | 0.6 |
| **High Technology Sector Total** | **13.9** | **2.1** | **-3.5** | **3.8** | **3.9** | **17.2** | **14.7** | **5.9** | **5.6** | **1.4** |
| **BC Industrial Aggregate** | **5.9** | **1.5** | **2.2** | **5.0** | **4.3** | **7.1** | **7.2** | **7.2** | **5.6** | **-2.1** |

[r] Revised
[p] Preliminary
Source: BC Stats and Statistics Canada

## Table 15. British Columbia High Technology Sector Average Weekly Earnings,[1] 1999-2009

Dollars per employee week (including overtime)

| INDUSTRY | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing Industries** | **860** | **880** | **900** | **930** | **980** | **990** | **1,020** | **1,060** | **1,010** | **1,040** | **1,060** |
| **Service Industries** | **920** | **980** | **940** | **940** | **930** | **970** | **1,120** | **1,210** | **1,200** | **1,210** | **1,260** |
| Motion picture production & post-production | 730 | 970 | 990 | 610 | 750 | 530 | 670 | 710 | 610 | 720 | 490 |
| Telecommunications | 880 | 880 | 840 | 860 | 850 | 950 | 1,050 | 1,010 | 1,090 | 1,100 | 1,290 |
| Engineering services | 960 | 1,090 | 1,240 | 1,170 | 1,160 | 1,160 | 1,290 | 1,370 | 1,460 | 1,440 | 1,490 |
| Software publishing | 920 | 950 | 1,030 | 1,050 | 1,150 | 1,140 | 1,150 | 1,260 | 1,330 | 1,340 | 1,480 |
| Other computer and related services | 1,010 | 1,050 | 780 | 900 | 820 | 950 | 1,190 | 1,390 | 1,260 | 1,240 | 1,260 |
| Other services | 870 | 900 | 960 | 960 | 960 | 1,000 | 1,080 | 1,110 | 1,140 | 1,130 | 1,190 |
| **High Technology Sector Total** | **910** | **960** | **930** | **930** | **940** | **980** | **1,100** | **1,180** | **1,170** | **1,180** | **1,220** |
| **BC Industrial Aggregate** | **650** | **660** | **660** | **670** | **690** | **700** | **720** | **750** | **770** | **790** | **800** |

% change from previous year

| INDUSTRY | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **Manufacturing Industries** | **1.3** | **3.2** | **3.0** | **5.7** | **0.6** | **2.6** | **4.4** | **-4.5** | **2.7** | **1.9** |
| **Service Industries** | **7.0** | **-4.7** | **-0.1** | **-0.3** | **4.5** | **15.0** | **8.2** | **-1.0** | **0.7** | **3.8** |
| Motion picture production & post-production | 32.7 | 2.3 | -38.7 | 23.3 | -29.6 | 27.7 | 5.4 | -14.4 | 19.7 | -32.3 |
| Telecommunications | -0.6 | -4.8 | 3.1 | -1.6 | 11.4 | 10.6 | -3.9 | 8.0 | 1.8 | 16.3 |
| Engineering services | 13.6 | 13.2 | -5.4 | -0.7 | -0.4 | 11.6 | 6.5 | 6.6 | -1.7 | 3.7 |
| Software publishing | 3.6 | 8.3 | 1.3 | 10.1 | -1.5 | 1.3 | 9.8 | 5.2 | 1.1 | 9.9 |
| Other computer and related services | 4.5 | -25.6 | 15.4 | -9.2 | 15.6 | 25.2 | 16.9 | -9.3 | -1.4 | 1.6 |
| Other services | 3.4 | 6.2 | 0.3 | 0.0 | 3.8 | 8.0 | 2.7 | 3.0 | -1.1 | 4.8 |
| **High Technology Sector Total** | **5.6** | **-3.0** | **0.6** | **0.8** | **3.7** | **12.7** | **7.4** | **-1.5** | **1.3** | **3.7** |
| **BC Industrial Aggregate** | **1.8** | **-0.7** | **2.0** | **2.3** | **1.8** | **3.6** | **2.9** | **3.3** | **2.8** | **0.8** |

1. Totals and percent changes are calculated using unrounded data.

[r] Revised

[p] Preliminary

Source: BC Stats and Statistics Canada

## Table 16. High Technology Sector Average Weekly Earnings, by Province, 1999-2009

| Province | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Canada | 890 | 910 | 940 | 950 | 980 | 1,060 | 1,070 | 1,150 | 1,190 | 1,230 | 1,270 |
| British Columbia | 910 | 960 | 930 | 930 | 940 | 980 | 1,100 | 1,180 | 1,170 | 1,180 | 1,220 |
| Alberta | 910 | 1,010 | 950 | 990 | 1,070 | 1,120 | 1,160 | 1,310 | 1,380 | 1,440 | 1,500 |
| Manitoba | 760 | 750 | 790 | 850 | 950 | 1,040 | 1,060 | 1,060 | 1,180 | 1,120 | 1,190 |
| Ontario | 940 | 950 | 1,000 | 1,000 | 1,020 | 1,110 | 1,100 | 1,180 | 1,220 | 1,280 | 1,310 |
| Quebec | 820 | 820 | 840 | 860 | 910 | 970 | 990 | 1,040 | 1,060 | 1,060 | 1,110 |

% change from previous year

| Province | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Canada | 2.5 | 2.8 | 1.3 | 3.7 | 7.2 | 1.6 | 7.2 | 3.3 | 3.3 | 3.2 |
| British Columbia | 5.6 | -3.0 | 0.6 | 0.8 | 3.7 | 12.7 | 7.4 | -1.5 | 1.3 | 3.7 |
| Alberta | 10.9 | -5.2 | 4.0 | 7.3 | 4.7 | 4.1 | 13.2 | 5.3 | 4.4 | 4.0 |
| Manitoba | -1.5 | 4.7 | 8.3 | 11.9 | 9.3 | 2.1 | -0.7 | 12.0 | -5.2 | 5.8 |
| Ontario | 0.9 | 5.4 | 0.1 | 2.0 | 8.8 | -1.4 | 7.3 | 3.4 | 5.4 | 2.5 |
| Quebec | -0.2 | 3.3 | 1.5 | 6.2 | 7.0 | 1.5 | 5.8 | 1.9 | -0.4 | 4.6 |

[r] Revised

[p] Preliminary

Source: BC Stats

## Table 17. High Technology Sector Wages and Salaries for Selected U.S. States,[1] 1999-2009

**Value ($Cdn million)[2]**

| State | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **761,040** | **849,989** | **852,061** | **799,930** | **706,442** | **687,018** | **677,213** | **683,381** | **689,437** | **704,568** | **730,610** |
| California | 155,495 | 199,136 | 181,381 | 164,594 | 146,803 | 146,538 | 145,743 | 146,558 | 146,711 | 146,616 | 151,632 |
| Texas | 55,646 | 63,515 | 65,849 | 59,999 | 52,093 | 50,295 | 50,399 | 52,459 | 52,846 | 54,683 | 55,697 |
| Florida | 25,146 | 28,195 | 29,827 | 28,981 | 25,687 | 25,760 | 25,885 | 26,020 | 25,570 | 25,945 | 26,810 |
| New York | 40,057 | 46,549 | 49,505 | 47,330 | 40,935 | 39,473 | 38,572 | 38,144 | 38,765 | 39,807 | 41,573 |
| Illinois | 29,403 | 31,974 | 32,343 | 30,042 | 25,855 | 24,773 | 24,612 | 24,150 | 23,948 | 24,472 | 24,779 |
| Virginia | 27,294 | 31,634 | 34,012 | 30,778 | 28,111 | 28,945 | 29,432 | 29,510 | 29,690 | 30,913 | 33,712 |
| New Jersey | 32,526 | 34,936 | 36,479 | 34,962 | 30,584 | 29,475 | 28,094 | 29,188 | 29,829 | 29,701 | 30,024 |
| Pennsylvania | 27,104 | 29,268 | 30,402 | 29,681 | 26,051 | 24,688 | 23,992 | 24,136 | 24,064 | 24,757 | 26,421 |
| Georgia | 19,617 | 22,836 | 22,694 | 21,476 | 19,221 | 18,142 | 17,755 | 17,797 | 17,922 | 17,928 | 18,560 |
| Colorado | 21,275 | 25,488 | 25,490 | 22,639 | 19,539 | 18,317 | 17,791 | 17,848 | 17,864 | 18,273 | 19,153 |
| Massachusetts | 34,164 | 42,540 | 41,674 | 37,525 | 32,766 | 31,743 | 30,604 | 30,843 | 31,787 | 32,877 | 34,068 |
| Ohio | 18,129 | 19,561 | 20,292 | 19,337 | 17,052 | 15,971 | 15,435 | 15,297 | 15,559 | 16,496 | 16,711 |
| Maryland | 41,466 | 18,254 | 20,021 | 20,242 | 18,334 | 18,387 | 18,182 | 18,150 | 18,662 | 19,373 | 21,438 |
| North Carolina | 17,091 | 19,601 | 20,400 | 18,893 | 16,618 | 16,229 | 16,306 | 16,252 | 16,721 | 17,131 | 18,081 |
| Michigan | 22,433 | 24,094 | 23,942 | 23,162 | 20,906 | 19,355 | 18,489 | 17,579 | 17,121 | 17,123 | 15,609 |
| Washington | 35,626 | 36,207 | 35,094 | 33,012 | 28,153 | 23,384 | 24,011 | 25,520 | 27,030 | 28,633 | 30,661 |
| Minnesota | 13,639 | 15,057 | 15,330 | 15,033 | 13,534 | 13,467 | 12,824 | 12,636 | 12,716 | 13,126 | 13,342 |
| Arizona | 12,865 | 15,001 | 15,375 | 14,428 | 12,628 | 12,441 | 12,387 | 12,802 | 12,514 | 12,749 | 13,134 |
| Missouri | 9,763 | 10,949 | 10,997 | 10,598 | 9,893 | 9,906 | 9,747 | 9,862 | 9,814 | 10,235 | 11,021 |
| Indiana | 10,061 | 10,232 | 10,749 | 10,721 | 9,593 | 9,701 | 9,304 | 9,245 | 9,121 | 9,674 | 9,898 |
| Other States | 112,237 | 124,960 | 130,204 | 126,498 | 112,087 | 110,028 | 107,649 | 109,387 | 111,183 | 114,054 | 118,288 |

**% change from previous year**

| State | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **11.7** | **0.2** | **-6.1** | **-11.7** | **-2.7** | **-1.4** | **0.9** | **0.9** | **2.2** | **3.7** |
| California | 28.1 | -8.9 | -9.3 | -10.8 | -0.2 | -0.5 | 0.6 | 0.1 | -0.1 | 3.4 |
| Texas | 14.1 | 3.7 | -8.9 | -13.2 | -3.5 | 0.2 | 4.1 | 0.7 | 3.5 | 1.9 |
| Florida | 12.1 | 5.8 | -2.8 | -11.4 | 0.3 | 0.5 | 0.5 | -1.7 | 1.5 | 3.3 |
| New York | 16.2 | 6.3 | -4.4 | -13.5 | -3.6 | -2.3 | -1.1 | 1.6 | 2.7 | 4.4 |
| Illinois | 8.7 | 1.2 | -7.1 | -13.9 | -4.2 | -0.6 | -1.9 | -0.8 | 2.2 | 1.3 |
| Virginia | 15.9 | 7.5 | -9.5 | -8.7 | 3.0 | 1.7 | 0.3 | 0.6 | 4.1 | 9.1 |
| New Jersey | 7.4 | 4.4 | -4.2 | -12.5 | -3.6 | -4.7 | 3.9 | 2.2 | -0.4 | 1.1 |
| Pennsylvania | 8.0 | 3.9 | -2.4 | -12.2 | -5.2 | -2.8 | 0.6 | -0.3 | 2.9 | 6.7 |
| Georgia | 16.4 | -0.6 | -5.4 | -10.5 | -5.6 | -2.1 | 0.2 | 0.7 | 0.0 | 3.5 |
| Colorado | 19.8 | 0.0 | -11.2 | -13.7 | -6.3 | -2.9 | 0.3 | 0.1 | 2.3 | 4.8 |
| Massachusetts | 24.5 | -2.0 | -10.0 | -12.7 | -3.1 | -3.6 | 0.8 | 3.1 | 3.4 | 3.6 |
| Ohio | 7.9 | 3.7 | -4.7 | -11.8 | -6.3 | -3.4 | -0.9 | 1.7 | 6.0 | 1.3 |
| Maryland | -56.0 | 9.7 | 1.1 | -9.4 | 0.3 | -1.1 | -0.2 | 2.8 | 3.8 | 10.7 |
| North Carolina | 14.7 | 4.1 | -7.4 | -12.0 | -2.3 | 0.5 | -0.3 | 2.9 | 2.4 | 5.5 |
| Michigan | 7.4 | -0.6 | -3.3 | -9.7 | -7.4 | -4.5 | -4.9 | -2.6 | 0.0 | -8.8 |
| Washington | 1.6 | -3.1 | -5.9 | -14.7 | -16.9 | 2.7 | 6.3 | 5.9 | 5.9 | 7.1 |
| Minnesota | 10.4 | 1.8 | -1.9 | -10.0 | -0.5 | -4.8 | -1.5 | 0.6 | 3.2 | 1.6 |
| Arizona | 16.6 | 2.5 | -6.2 | -12.5 | -1.5 | -0.4 | 3.4 | -2.3 | 1.9 | 3.0 |
| Missouri | 12.1 | 0.4 | -3.6 | -6.7 | 0.1 | -1.6 | 1.2 | -0.5 | 4.3 | 7.7 |
| Indiana | 1.7 | 5.1 | -0.3 | -10.5 | 1.1 | -4.1 | -0.6 | -1.3 | 6.1 | 2.3 |
| Other States | 11.3 | 4.2 | -2.8 | -11.4 | -1.8 | -2.2 | 1.6 | 1.6 | 2.6 | 3.7 |

1. Top 20 states by employment.
2. Figures converted from U.S. dollar data using an average annual exchange rate.

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 18. High Technology Sector Average Weekly Earnings for Selected U.S. States,[1] 1999-2009

Value ($Cdn)[2]

| State | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **1,772** | **1,882** | **1,902** | **1,935** | **1,798** | **1,753** | **1,698** | **1,671** | **1,656** | **1,669** | **1,808** |
| California | 2,126 | 2,508 | 2,317 | 2,291 | 2,170 | 2,138 | 2,094 | 2,048 | 2,034 | 2,007 | 2,185 |
| Texas | 1,709 | 1,831 | 1,926 | 1,941 | 1,766 | 1,734 | 1,694 | 1,704 | 1,663 | 1,679 | 1,804 |
| Florida | 1,381 | 1,465 | 1,537 | 1,587 | 1,459 | 1,429 | 1,378 | 1,359 | 1,342 | 1,353 | 1,481 |
| New York | 1,639 | 1,783 | 1,915 | 1,967 | 1,821 | 1,778 | 1,724 | 1,688 | 1,699 | 1,724 | 1,854 |
| Illinois | 1,711 | 1,795 | 1,846 | 1,886 | 1,740 | 1,714 | 1,694 | 1,641 | 1,618 | 1,634 | 1,748 |
| Virginia | 1,877 | 1,972 | 2,121 | 2,067 | 1,938 | 1,902 | 1,868 | 1,813 | 1,793 | 1,828 | 2,012 |
| New Jersey | 2,021 | 2,102 | 2,188 | 2,294 | 2,122 | 2,085 | 1,981 | 1,989 | 1,988 | 2,022 | 2,171 |
| Pennsylvania | 1,610 | 1,671 | 1,739 | 1,832 | 1,696 | 1,650 | 1,595 | 1,556 | 1,546 | 1,562 | 1,724 |
| Georgia | 1,622 | 1,784 | 1,819 | 1,862 | 1,709 | 1,646 | 1,609 | 1,591 | 1,575 | 1,577 | 1,693 |
| Colorado | 1,838 | 2,048 | 2,057 | 2,082 | 1,956 | 1,860 | 1,813 | 1,817 | 1,787 | 1,779 | 1,915 |
| Massachusetts | 1,986 | 2,284 | 2,228 | 2,265 | 2,127 | 2,111 | 2,022 | 1,996 | 2,014 | 2,027 | 2,160 |
| Ohio | 1,394 | 1,475 | 1,563 | 1,603 | 1,487 | 1,452 | 1,389 | 1,355 | 1,351 | 1,393 | 1,474 |
| Maryland | 4,430 | 1,802 | 1,967 | 2,036 | 1,860 | 1,828 | 1,757 | 1,717 | 1,724 | 1,757 | 1,944 |
| North Carolina | 1,524 | 1,665 | 1,720 | 1,768 | 1,647 | 1,609 | 1,547 | 1,511 | 1,508 | 1,519 | 1,667 |
| Michigan | 1,742 | 1,805 | 1,858 | 1,894 | 1,782 | 1,713 | 1,636 | 1,574 | 1,549 | 1,579 | 1,600 |
| Washington | 2,571 | 2,530 | 2,437 | 2,512 | 2,296 | 1,918 | 1,887 | 1,885 | 1,855 | 1,879 | 2,044 |
| Minnesota | 1,470 | 1,592 | 1,671 | 1,746 | 1,663 | 1,647 | 1,536 | 1,491 | 1,479 | 1,513 | 1,640 |
| Arizona | 1,592 | 1,702 | 1,752 | 1,801 | 1,666 | 1,630 | 1,601 | 1,587 | 1,548 | 1,577 | 1,721 |
| Missouri | 1,037 | 1,535 | 1,620 | 1,671 | 1,585 | 1,548 | 1,504 | 1,482 | 1,450 | 1,486 | 1,637 |
| Indiana | 1,469 | 1,465 | 1,567 | 1,635 | 1,506 | 1,508 | 1,432 | 1,402 | 1,361 | 1,423 | 1,519 |

% change from previous year

| State | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **USA** | **6.2** | **1.1** | **1.7** | **-7.1** | **-2.5** | **-3.1** | **-1.6** | **-0.9** | **0.8** | **8.3** |
| California | 17.9 | -7.6 | -1.1 | -5.3 | -1.4 | -2.1 | -2.2 | -0.6 | -1.3 | 8.9 |
| Texas | 7.1 | 5.2 | 0.7 | -9.0 | -1.8 | -2.3 | 0.6 | -2.4 | 1.0 | 7.4 |
| Florida | 6.1 | 4.9 | 3.3 | -8.1 | -2.1 | -3.6 | -1.4 | -1.3 | 0.9 | 9.4 |
| New York | 8.8 | 7.4 | 2.7 | -7.4 | -2.4 | -3.1 | -2.1 | 0.7 | 1.5 | 7.5 |
| Illinois | 4.9 | 2.9 | 2.1 | -7.7 | -1.5 | -1.1 | -3.2 | -1.4 | 1.0 | 7.0 |
| Virginia | 5.1 | 7.6 | -2.5 | -6.2 | -1.9 | -1.7 | -3.0 | -1.1 | 2.0 | 10.1 |
| New Jersey | 4.0 | 4.1 | 4.9 | -7.5 | -1.8 | -5.0 | 0.4 | 0.0 | 1.7 | 7.4 |
| Pennsylvania | 3.8 | 4.0 | 5.4 | -7.4 | -2.7 | -3.4 | -2.4 | -0.7 | 1.0 | 10.4 |
| Georgia | 10.0 | 2.0 | 2.4 | -8.2 | -3.7 | -2.2 | -1.1 | -1.0 | 0.1 | 7.4 |
| Colorado | 11.4 | 0.5 | 1.2 | -6.1 | -4.9 | -2.5 | 0.3 | -1.7 | -0.5 | 7.7 |
| Massachusetts | 15.0 | -2.4 | 1.7 | -6.1 | -0.8 | -4.2 | -1.3 | 0.9 | 0.6 | 6.6 |
| Ohio | 5.8 | 6.0 | 2.5 | -7.2 | -2.4 | -4.3 | -2.5 | -0.3 | 3.2 | 5.8 |
| Maryland | -59.3 | 9.2 | 3.5 | -8.6 | -1.8 | -3.9 | -2.3 | 0.4 | 1.9 | 10.6 |
| North Carolina | 9.2 | 3.3 | 2.8 | -6.8 | -2.3 | -3.9 | -2.3 | -0.2 | 0.7 | 9.7 |
| Michigan | 3.7 | 2.9 | 1.9 | -5.9 | -3.9 | -4.4 | -3.8 | -1.6 | 1.9 | 1.4 |
| Washington | -1.6 | -3.7 | 3.1 | -8.6 | -16.5 | -1.6 | -0.1 | -1.6 | 1.3 | 8.8 |
| Minnesota | 8.3 | 4.9 | 4.5 | -4.7 | -0.9 | -6.7 | -2.9 | -0.8 | 2.3 | 8.4 |
| Arizona | 6.9 | 2.9 | 2.8 | -7.5 | -2.1 | -1.8 | -0.9 | -2.4 | 1.9 | 9.2 |
| Missouri | 47.9 | 5.6 | 3.1 | -5.1 | -2.3 | -2.8 | -1.5 | -2.1 | 2.5 | 10.1 |
| Indiana | -0.3 | 7.0 | 4.3 | -7.9 | 0.2 | -5.1 | -2.1 | -2.9 | 4.5 | 6.8 |

1. Top 20 states by employment.
2. Figures converted from U.S. dollar data using an average annual exchange rate.

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 19. High Technology Sector Business Counts,[1] by Development Region and Regional District, 2007-2009

| Development Region / Regional District | | 2007 | | | 2008 | | | 2009 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Mfg | Service | Total | Mfg | Service | Total | Mfg | Service | Total |
| **Vancouver Island/Coast** | | **108** | **1,309** | **1,417** | **104** | **1,349** | **1,453** | **99** | **1,380** | **1,479** |
| 23 | Alberni-Clayoquot | 3 | 25 | 28 | 3 | 27 | 30 | 2 | 36 | 38 |
| 17 | Capital | 61 | 834 | 895 | 61 | 845 | 906 | 56 | 856 | 912 |
| 45 | Central Coast | 0 | 4 | 4 | 0 | 3 | 3 | 0 | 4 | 4 |
| 25 | Comox-Strathcona | 14 | 142 | 156 | 13 | 136 | 149 | 16 | 139 | 155 |
| 19 | Cowichan Valley | 12 | 76 | 88 | 12 | 85 | 97 | 11 | 82 | 93 |
| 43 | Mount Waddington | 0 | 15 | 15 | 0 | 15 | 15 | 0 | 12 | 12 |
| 21 | Nanaimo | 18 | 196 | 214 | 15 | 221 | 236 | 12 | 222 | 234 |
| 27 | Powell River | 0 | 17 | 17 | 0 | 17 | 17 | 2 | 29 | 31 |
| **Mainland/Southwest** | | **552** | **5,285** | **5,837** | **542** | **5,464** | **6,006** | **529** | **5,488** | **6,017** |
| 09 | Fraser Valley | 28 | 186 | 214 | 27 | 202 | 229 | 27 | 210 | 237 |
| 15 | Greater Vancouver | 514 | 5,005 | 5,519 | 509 | 5,163 | 5,672 | 498 | 5,182 | 5,680 |
| 31 | Squamish-Lillooet | 3 | 49 | 52 | 2 | 51 | 53 | 2 | 61 | 63 |
| 29 | Sunshine Coast | 7 | 45 | 52 | 4 | 48 | 52 | 2 | 35 | 37 |
| **Thompson/Okanagan** | | **77** | **621** | **698** | **84** | **634** | **718** | **80** | **667** | **747** |
| 35 | Central Okanagan | 41 | 236 | 277 | 45 | 240 | 285 | 43 | 254 | 297 |
| 39 | Columbia-Shuswap | 4 | 61 | 65 | 4 | 64 | 68 | 4 | 69 | 73 |
| 37 | North Okanagan | 9 | 91 | 100 | 12 | 93 | 105 | 11 | 100 | 111 |
| 07 | Okanagan-Similkameen | 8 | 83 | 91 | 8 | 80 | 88 | 9 | 84 | 93 |
| 33 | Thompson-Nicola | 15 | 150 | 165 | 15 | 157 | 172 | 13 | 160 | 173 |
| **Kootenay** | | **13** | **187** | **200** | **15** | **178** | **193** | **12** | **186** | **198** |
| 03 | Central Kootenay | 6 | 89 | 95 | 8 | 91 | 99 | 5 | 93 | 98 |
| 01 | East Kootenay | 3 | 69 | 72 | 3 | 64 | 67 | 3 | 69 | 72 |
| 05 | Kootenay Boundary | 4 | 29 | 33 | 4 | 23 | 27 | 4 | 24 | 28 |
| **Cariboo** | | **15** | **157** | **172** | **16** | **158** | **174** | **19** | **146** | **165** |
| 41 | Cariboo | 4 | 65 | 69 | 5 | 68 | 73 | 6 | 58 | 64 |
| 53 | Fraser-Fort George | 11 | 92 | 103 | 11 | 90 | 101 | 13 | 88 | 101 |
| **North Coast** | | **2** | **49** | **51** | **2** | **52** | **54** | **1** | **55** | **56** |
| 49 | Kitimat-Stikine | 2 | 35 | 37 | 2 | 37 | 39 | 1 | 37 | 38 |
| 47 | Skeena-Queen Charlotte | 0 | 14 | 14 | 0 | 15 | 15 | 0 | 18 | 18 |
| **Nechako** | | **4** | **49** | **53** | **2** | **43** | **45** | **1** | **42** | **43** |
| 51 | Bulkley-Nechako | 4 | 47 | 51 | 2 | 41 | 43 | 1 | 40 | 41 |
| 57 | Stikine | 0 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 |
| **Northeast** | | **6** | **176** | **182** | **6** | **171** | **177** | **8** | **181** | **189** |
| 55 | Peace River | 6 | 175 | 181 | 6 | 171 | 177 | 8 | 180 | 188 |
| 59 | Northern Rockies | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| **Total2** | | **779** | **7,865** | **8,644** | **772** | **8,060** | **8,832** | **751** | **8,152** | **8,903** |

1. Businesses with zero employees are not included in these figures.
2. Figures do not add to totals because some establishments did not have geographic codes.

Note: Business counts are now reported as "statistical locations" which differ from the "statistical establishment" definition used in previous editions of the High Technology Profile report.

Source: BC Stats

## Table 20. B.C. High Technology Sector Business Counts,[1] by Industry, 2007-2009

| Industry | 2007 | 2008 | 2009 |
|---|---|---|---|
| **Manufacturing Industries** | **779** | **772** | **751** |
| ***Service Industries*** | ***7,865*** | ***8,060*** | ***8,152*** |
| Motion picture production & post-production | 825 | 826 | 771 |
| Telecommunications | 284 | 293 | 287 |
| Engineering services | 1,810 | 1,796 | 1,761 |
| Computer and related services | 3,060 | 3,181 | 3,271 |
| Other services | 1,886 | 1,964 | 2,062 |
| **High Technology Sector** | **8,644** | **8,832** | **8,903** |

| | % change from previous year | |
|---|---|---|
| **Industry** | **2008** | **2009** |
| **Manufacturing Industries** | **-0.9** | **-2.7** |
| **Service Industries** | **2.5** | **1.1** |
| Motion picture production & post-production | 0.1 | -6.7 |
| Telecommunications | 3.2 | -2.0 |
| Engineering services | -0.8 | -1.9 |
| Computer and related services | 4.0 | 2.8 |
| Other services | 4.1 | 5.0 |
| **High Technology Sector** | **2.2** | **0.8** |

1. Businesses with zero employees are not included in these figures.

Note: Business counts are now reported as "statistical locations" which differ from the "statistical establishment" definition used in previous editions of the High Technology Profile report.

Source: BC Stats and Statistics Canada

## Table 21. B.C. High Technology Sector Business Counts, by Industry and Business Size, 2009

| | Number of businesses, by number of employees | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Industry** | **1 to 4** | **5 to 9** | **10 to 19** | **20 to 49** | **50 plus** | **Subtotal** | **None** | **Total** |
| **Manufacturing Industries** | **343** | **151** | **103** | **89** | **65** | **751** | **583** | **1,334** |
| **Service Industries** | **5,766** | **1,013** | **662** | **428** | **283** | **8,152** | **18,170** | **26,322** |
| Motion picture production & post-production | 641 | 62 | 36 | 15 | 17 | 771 | 2,204 | 2,975 |
| Telecommunications | 145 | 65 | 29 | 26 | 22 | 287 | 339 | 626 |
| Engineering services | 1,217 | 205 | 162 | 120 | 57 | 1,761 | 3,063 | 4,824 |
| Computer and related services | 2,356 | 374 | 252 | 164 | 125 | 3,271 | 8,041 | 11,312 |
| Other services | 1,407 | 307 | 183 | 103 | 62 | 2,062 | 4,523 | 6,585 |
| **Total for sector** | **6,109** | **1,164** | **765** | **517** | **348** | **8,903** | **18,753** | **27,656** |
| **Total for all Industries** | **99,077** | **35,729** | **21,363** | **13,078** | **6,877** | **176,124** | **186,541** | **362,665** |

Note: Business counts are now reported as "statistical locations" which differ from the "statistical establishment" definition used in previous editions of the High Technology Profile report.

Source: BC Stats and Statistics Canada

## Table 22. High Technology Sector Business Counts,[1] by Province and Industry, 2009

| Industry | BC | Alberta | Manitoba | Ontario | Quebec | Canada |
|---|---|---|---|---|---|---|
| **Manufacturing Industries** | **751** | **600** | **140** | **2,282** | **1,289** | **5,342** |
| Chemicals and Pharmaceuticals | 52 | 37 | 11 | 154 | 121 | 401 |
| Computer and Electronic Products | 231 | 187 | 35 | 960 | 435 | 1,924 |
| Aerospace | 39 | 23 | 14 | 104 | 74 | 273 |
| Medical Equipment | 308 | 245 | 52 | 615 | 420 | 1,762 |
| Other Manufacturing | 121 | 108 | 28 | 449 | 239 | 982 |
| **Service Industries** | **8,152** | **11,677** | **903** | **22,711** | **10,788** | **57,374** |
| Motion picture production & post-production | 771 | 159 | 97 | 1,396 | 995 | 3,585 |
| Telecommunications | 287 | 201 | 50 | 781 | 443 | 1,951 |
| Engineering services | 1,761 | 3,311 | 140 | 3,269 | 1,678 | 10,918 |
| Computer and related services | 3,271 | 3,280 | 383 | 13,817 | 5,488 | 27,158 |
| Other services | 2,062 | 4,726 | 233 | 3,448 | 2,184 | 13,762 |
| **Total for sector** | **8,903** | **12,277** | **1,043** | **24,993** | **12,077** | **62,716** |
| **Total for all Industries** | **176,124** | **157,171** | **36,833** | **394,683** | **247,340** | **1,137,681** |

1. Businesses with zero employees are not included in these figures.

Note: Business counts are now reported as "statistical locations" which differ from the "statistical establishment" definition used in previous editions of the High Technology Profile report.

Source: BC Stats and Statistics Canada

## Table 23. Shipments and Exports of B.C. High Technology Goods and Total Processed Goods, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002 | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **High Technology Goods** | | | | | | | | | | | |
| Total Shipments[1] | 2,328 | 2,898 | 2,545 | 2,265 | 2,404 | 2,642 | 2,504 | 2,897 | 2,957 | 2,959 | 2,587 |
| Exports | 840 | 923 | 748 | 685 | 635 | 687 | 705 | 857 | 869 | 988 | 865 |
| Exports as % of Shipments | 36.1 | 31.9 | 29.4 | 30.2 | 26.4 | 26.0 | 28.2 | 29.6 | 29.4 | 33.4 | 33.5 |
| **Total Processed Goods** | | | | | | | | | | | |
| Total Shipments[1] | 36,679 | 40,699 | 38,303 | 38,610 | 39,772 | 41,607 | 42,883 | 44,480 | 42,421 | 39,635 | 33,121 |
| Exports of Processed Goods[2] | 23,955 | 25,175 | 22,869 | 22,534 | 20,879 | 23,572 | 22,579 | 22,774 | 21,801 | 19,632 | 15,542 |
| Export Orientation (%) | 65.3 | 61.9 | 59.7 | 58.4 | 52.5 | 56.7 | 52.7 | 51.2 | 51.4 | 49.5 | 46.9 |

**% change from previous year**

| | 2000 | 2001 | 2002 | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **High Technology Goods** | | | | | | | | | | |
| Total Shipments | 24.5 | -12.2 | -11.0 | 6.1 | 9.9 | -5.2 | 15.7 | 2.1 | 0.1 | -12.6 |
| Exports | 9.9 | -19.0 | -8.5 | -7.2 | 8.1 | 2.7 | 21.5 | 1.4 | 13.8 | -12.5 |
| **Total Processed Goods** | | | | | | | | | | |
| Total Shipments | 11.0 | -5.9 | 0.8 | 3.0 | 4.6 | 3.1 | 3.7 | -4.6 | -6.6 | -16.4 |
| Exports of Processed Goods | 5.1 | -9.2 | -1.5 | -7.3 | 12.9 | -4.2 | 0.9 | -4.3 | -9.9 | -20.8 |

1. Total shipments represent revenues from all production, sales, services and related activities in the manufacturing sector.
2. "Processed goods" excludes selected agricultural, fish, logging, mining and energy products not produced by B.C. manufacturing industries.

[r] Revised
[p] Preliminary

Source: BC Stats and Statistics Canada

## Table 24. B.C. Domestic Exports of High Technology Goods, by Destination and Mode of Transport, 1999-2009

**Value ($ million)[1]**

| Destination | Mode of Transport[2] | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **United States** | Land | 408.6 | 477.4 | 343.8 | 384.2 | 357.5 | 352.0 | 330.8 | 402.0 | 430.3 | 439.4 | 399.3 |
| | Sea | 5.2 | 1.5 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Air | 266.2 | 294.1 | 251.2 | 173.9 | 149.2 | 157.2 | 156.3 | 185.5 | 167.5 | 178.5 | 183.6 |
| | **Total** | **680.0** | **773.0** | **596.4** | **558.1** | **506.6** | **509.3** | **487.1** | **587.5** | **597.8** | **617.9** | **582.9** |
| **Pacific Rim (total)** | Land | 6.8 | 0.4 | 1.0 | 7.5 | 4.4 | 1.5 | 0.6 | 0.2 | 8.1 | 1.9 | 0.5 |
| | Sea | 4.7 | 9.4 | 4.6 | 13.7 | 2.2 | 3.4 | 11.3 | 5.4 | 3.3 | 7.8 | 7.6 |
| | Air | 72.3 | 56.9 | 27.8 | 25.9 | 35.7 | 61.3 | 85.6 | 88.1 | 61.9 | 91.4 | 78.8 |
| | **Total** | **83.8** | **66.8** | **33.3** | **47.2** | **42.3** | **66.3** | **97.4** | **93.7** | **73.3** | **101.1** | **86.8** |
| **Japan** | Land | 0.4 | 0.1 | 0.3 | 4.5 | 1.7 | 0.3 | 0.3 | 0.2 | 5.2 | 0.0 | 0.0 |
| | Sea | 0.3 | 2.1 | 0.7 | 12.1 | 0.1 | 0.3 | 0.1 | 0.8 | 0.5 | 1.3 | 0.6 |
| | Air | 4.5 | 28.1 | 8.7 | 5.4 | 5.5 | 10.4 | 19.6 | 18.7 | 10.4 | 21.9 | 10.5 |
| | **Total** | **5.2** | **30.4** | **9.7** | **22.0** | **7.3** | **11.1** | **20.0** | **19.7** | **16.1** | **23.3** | **11.1** |
| **Pacific Rim (excluding Japan)** | Land | 6.4 | 0.3 | 0.7 | 3.1 | 2.7 | 1.2 | 0.3 | 0.0 | 2.9 | 1.8 | 0.5 |
| | Sea | 4.4 | 7.4 | 3.8 | 1.6 | 2.1 | 3.1 | 11.2 | 4.6 | 2.8 | 6.4 | 7.0 |
| | Air | 67.8 | 28.8 | 19.1 | 20.5 | 30.2 | 50.9 | 66.0 | 69.3 | 51.4 | 69.5 | 68.3 |
| | **Total** | **78.6** | **36.4** | **23.6** | **25.1** | **35.0** | **55.2** | **77.4** | **74.0** | **57.2** | **77.8** | **75.8** |
| **European Union** | Land | 0.2 | 1.6 | 3.0 | 0.5 | 0.3 | 5.2 | 0.5 | 0.4 | 1.0 | 0.5 | 1.2 |
| | Sea | 4.6 | 1.2 | 8.3 | 5.3 | 7.9 | 8.3 | 2.1 | 3.5 | 15.7 | 82.5 | 21.2 |
| | Air | 49.4 | 57.4 | 76.4 | 52.5 | 43.3 | 52.2 | 67.7 | 102.6 | 110.0 | 109.6 | 104.4 |
| | **Total** | **54.2** | **60.3** | **87.8** | **58.3** | **51.5** | **65.7** | **70.3** | **106.6** | **126.7** | **192.6** | **126.9** |
| **All Other Countries** | Land | 1.6 | 2.1 | 7.1 | 1.6 | 1.3 | 2.3 | 0.7 | 5.2 | 4.7 | 5.4 | 3.1 |
| | Sea | 1.2 | 2.6 | 9.1 | 1.9 | 2.3 | 2.9 | 2.0 | 2.7 | 4.3 | 5.2 | 1.9 |
| | Air | 19.3 | 18.3 | 14.3 | 17.5 | 31.1 | 40.2 | 47.7 | 61.0 | 61.8 | 66.2 | 63.6 |
| | **Total** | **22.0** | **23.0** | **30.6** | **21.0** | **34.7** | **45.4** | **50.3** | **68.8** | **70.9** | **76.8** | **68.6** |
| **Total** | Land | 417.2 | 481.6 | 354.9 | 393.8 | 363.5 | 361.0 | 332.5 | 407.7 | 444.2 | 447.2 | 404.2 |
| | Sea | 15.7 | 14.7 | 23.4 | 20.9 | 12.4 | 14.7 | 15.3 | 11.6 | 23.4 | 95.4 | 30.6 |
| | Air | 407.2 | 426.7 | 369.8 | 269.9 | 259.2 | 311.0 | 357.3 | 437.2 | 401.2 | 445.8 | 430.4 |
| | **Total** | **840.1** | **923.1** | **748.1** | **684.6** | **635.2** | **686.6** | **705.1** | **856.5** | **868.8** | **988.4** | **865.2** |

**% of Exports to Destination[3]**

| Destination | Mode of Transport | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **United States** | Land | 60.1 | 61.8 | 57.6 | 68.8 | 70.6 | 69.1 | 67.9 | 68.4 | 72.0 | 71.1 | 68.5 |
| | Sea | 0.8 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Air | 39.1 | 38.0 | 42.1 | 31.2 | 29.4 | 30.9 | 32.1 | 31.6 | 28.0 | 28.9 | 31.5 |
| **Pacific Rim (total)** | Land | 8.1 | 0.7 | 3.0 | 16.0 | 10.4 | 2.3 | 0.6 | 0.2 | 11.1 | 1.9 | 0.6 |
| | Sea | 5.6 | 14.1 | 13.7 | 29.1 | 5.2 | 5.2 | 11.6 | 5.8 | 4.6 | 7.7 | 8.7 |
| | Air | 86.3 | 85.2 | 83.3 | 54.9 | 84.4 | 92.5 | 87.9 | 94.0 | 84.4 | 90.4 | 90.7 |
| **Japan** | Land | 8.3 | 0.5 | 3.1 | 20.3 | 23.7 | 2.8 | 1.5 | 0.8 | 32.0 | 0.2 | 0.3 |
| | Sea | 5.1 | 6.8 | 7.7 | 55.1 | 1.5 | 2.7 | 0.3 | 4.0 | 3.3 | 5.8 | 5.1 |
| | Air | 86.6 | 92.7 | 89.2 | 24.6 | 74.7 | 94.4 | 98.2 | 95.2 | 64.6 | 94.0 | 94.6 |
| **Pacific Rim (excluding Japan)** | Land | 8.1 | 0.8 | 2.9 | 12.2 | 7.6 | 2.2 | 0.3 | 0.0 | 5.1 | 2.4 | 0.6 |
| | Sea | 5.6 | 20.2 | 16.2 | 6.4 | 5.9 | 5.6 | 14.5 | 6.2 | 4.9 | 8.3 | 9.3 |
| | Air | 86.3 | 78.9 | 81.0 | 81.5 | 86.5 | 92.2 | 85.2 | 93.7 | 89.9 | 89.3 | 90.2 |
| **European Union** | Land | 0.5 | 2.7 | 3.5 | 0.8 | 0.7 | 7.9 | 0.7 | 0.4 | 0.8 | 0.2 | 1.0 |
| | Sea | 8.5 | 2.0 | 9.5 | 9.1 | 15.3 | 12.7 | 3.0 | 3.3 | 12.4 | 42.8 | 16.7 |
| | Air | 91.0 | 95.3 | 87.0 | 90.2 | 84.1 | 79.4 | 96.3 | 96.3 | 86.8 | 56.9 | 82.3 |
| **All Other Countries** | Land | 7.1 | 9.2 | 23.4 | 7.7 | 3.9 | 5.0 | 1.3 | 7.5 | 6.7 | 7.0 | 4.6 |
| | Sea | 5.4 | 11.2 | 29.8 | 8.8 | 6.7 | 6.3 | 3.9 | 3.9 | 6.1 | 6.7 | 2.7 |
| | Air | 87.5 | 79.6 | 46.8 | 83.5 | 89.4 | 88.7 | 94.8 | 88.6 | 87.2 | 86.2 | 92.7 |
| **Total** | Land | 49.7 | 52.2 | 47.4 | 57.5 | 57.2 | 52.6 | 47.2 | 47.6 | 51.1 | 45.2 | 46.7 |
| | Sea | 1.9 | 1.6 | 3.1 | 3.0 | 1.9 | 2.1 | 2.2 | 1.4 | 2.7 | 9.7 | 3.5 |
| | Air | 48.5 | 46.2 | 49.4 | 39.4 | 40.8 | 45.3 | 50.7 | 51.0 | 46.2 | 45.1 | 49.7 |

1. Totals may not equal the sum of Land, Sea and Air due to the fact that some respondents did not fill in the survey completely.
2. Shipments by land to overseas markets represent the export of B.C. produced high technology products transshipped through U.S. Ports such as Seattle or Portland.
3. Percentages may not add to 100 due to rounding.

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 25. Top 25 British Columbia High Technology Export Commodities, 2009[P]

| HS Code | Commodity Description [1] | Value ($000,000) | % Total Exports |
|---|---|---|---|
| 88033000 | Aircraft parts nes | 113.2 | 13.1 |
| 90328900 | Automatic regulating or controlling instruments and apparatus, nes | 69.9 | 8.1 |
| 84715000 | Process units, o/t 8471.41/.49, w/n cntg in same housing storage, input, output units | 60.0 | 6.9 |
| 85258010 | Television cameras | 50.3 | 5.8 |
| 90189000 | Instruments and appliances used in medical or veterinary sciences, nes | 39.4 | 4.5 |
| 85258020 | Digital cameras | 36.7 | 4.2 |
| 90213900 | Artificial parts of the body, nes | 34.0 | 3.9 |
| 85235290 | "Smart cards", nes | 29.7 | 3.4 |
| 85177000 | Parts, of TV sets, incl for cell/wireless networks, oth app for trans/recep of voice/img/data | 22.6 | 2.6 |
| 84705000 | Cash registers | 21.3 | 2.5 |
| 85414000 | Photosensitive semiconductor devices, photovoltaic cells & light emitting diodes | 19.4 | 2.2 |
| 84733000 | Parts and accessories of automatic data processing machines & units thereof | 19.0 | 2.2 |
| 84714900 | Other digital automatic data processing machines, presented in the form of systems | 18.8 | 2.2 |
| 85269100 | Radio navigational aid apparatus | 18.6 | 2.2 |
| 85256000 | Transmission apparatus, for radio-broadcasting/tv, incorporating reception apparatus | 18.6 | 2.1 |
| 90181200 | Ultrasonic scanning apparatus | 18.1 | 2.1 |
| 28444019 | Radioactive elements & isotopes and compounds, nes | 18.1 | 2.1 |
| 85234039 | Optical media, recorded discs for laser reading systems, nes | 17.6 | 2.0 |
| 85176190 | Base stations, nes | 16.9 | 2.0 |
| 90148000 | Navigational instruments and appliances nes | 15.2 | 1.8 |
| 85176919 | Elecrical apparatus for line telephony or line telegraphy, nes | 14.6 | 1.7 |
| 88032000 | Aircraft under-carriages and parts thereof | 14.6 | 1.7 |
| 90278000 | Instruments and apparatus for physical or chemical analysis, nes | 10.8 | 1.2 |
| 90319000 | Parts and accessories for measuring or checking inst, appl and machines, nes | 10.8 | 1.2 |
| 90279000 | Microtomes; parts/accessories of inst. & apparatus for physical/chemical analysis, nes | 10.1 | 1.2 |
| **Subtotal** | | **718.1** | **83.0** |
| | All Other High Technology Commodities | 147.1 | 17.0 |
| **Total** | | **865.2** | **100.0** |

HS code = Harmonized System commodity code; NES=Not Elsewhere Specified

1. Commodity descriptions are drawn from the approved Harmonized System coding manual. They contain some abbreviations that have been left in the original form in this table.

[P] Preliminary

Source: BC Stats and Statistics Canada

## Table 26. Top 25 British Columbia High Technology Import Commodities, 2009[P]

| HS Code | Commodity Description [1] | Value ($000,000) | % Total Imports |
|---|---|---|---|
| 8471300000 | Portable digital auto data process mach, not more than 10 kg, w CPU, keybrd & display | 312.1 | 7.2 |
| 8528723300 | Colour, high definition, television receivers, with flat panel screen, nes | 257.1 | 5.9 |
| 8517120020 | Cellular telephones, other than for installation in motor vehicles | 208.0 | 4.8 |
| 8517620090 | Machines for r/c/t or regenertation voice, images or data, incl switching & routing app,nes | 171.2 | 3.9 |
| 8471500090 | Digital process units, o/t 8471.41/49, w/n cntg strg,input/output o/t w CRT, nes | 167.2 | 3.8 |
| 8525800030 | Digital cameras and video camera recorders | 134.5 | 3.1 |
| 3004900079 | Medicaments nes, for human use, in dosage | 121.3 | 2.8 |
| 8803300000 | Parts of airplanes or helicopters nes | 119.9 | 2.8 |
| 8802400014 | Airplanes,passenger, non military, of an unladen weight >15000kg,new | 108.3 | 2.5 |
| 8517700090 | Parts tel sets; oth app for trans/recep voice/img/data, o/t 84.43,85.25,85.27,85.28, nes[2] | 86.7 | 2.0 |
| 8473302000 | Printed circuit assemblies of the machines of heading 84.71 | 80.2 | 1.8 |
| 8473309000 | Parts & access (o/t printed circuit assy) of the machines of heading 84.71, nes | 79.3 | 1.8 |
| 8526910099 | Radio navigational aid apparatus, nes | 78.6 | 1.8 |
| 8528510000 | Other monitors, of a kind used in an automatic data processing system of hd 84.71[3] | 72.9 | 1.7 |
| 8443990090 | Other parts and accessories of printing machinery, nes | 71.5 | 1.6 |
| 8528712000 | TV reception apparatus, set-top boxes with communication function, etc. | 68.6 | 1.6 |
| 8471700013 | Other hard magnetic disk drive units, other than presented in form of system | 64.9 | 1.5 |
| 8523401011 | Rec laser readg discs, for reprod phenom o/t snd/img, prepackd softw, for adpm, for retail | 49.0 | 1.1 |
| 8471410090 | Other digital auto data process mach containting CPU, input & output, other than CRT, nes | 46.8 | 1.1 |
| 8517700015 | Parts, printed circuit asy, of goods of cl 8517.62.00.10, 8517.62.00.90 or 8517.69.10.00[4] | 45.1 | 1.0 |
| 8411910021 | Parts of turbojet or turbopropeller for civil aircraft | 41.3 | 0.9 |
| 8521901000 | Laser video disc players, w/n incorp video tuner | 38.1 | 0.9 |
| 8471801000 | Control or adapter units, other than in the form of a system | 37.7 | 0.9 |
| 8542311043 | MIC, digital for mounted silicon MOS tech, o/t memory, micropro int data bus >= 32 bits | 36.7 | 0.8 |
| 2934999990 | Heterocyclic compounds, nes | 36.3 | 0.8 |
| **Subtotal** | | **2,533.0** | **58.1** |
| | All Other High Technology Commodities | 1,824.2 | 41.9 |
| **Total** | | **4,357.2** | **100.0** |

HS code = Harmonized System commodity code; NES=Not Elsewhere Specified

1. Commodity descriptions are drawn from the approved Harmonized System coding manual. They contain some abbreviations that have been left in the original form in this table.
2. Refers to facsimile machines, transmission/reception apparatus for radio/TV broadcasting.
3. Refers to automatic data processing machines, magnetic or optical readers, etc.
4. Refers to telephonic switching apparatus, facsimile apparatus, etc.

[P] Preliminary

Source: BC Stats

## Table 27. B.C. Domestic Exports of High Technology Goods and Total Goods, by Destination 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **High Technology Exports**[1] | | | | | | | | | | | |
| United States | 680.0 | 773.0 | 596.4 | 558.1 | 506.6 | 509.3 | 487.1 | 587.5 | 597.8 | 617.9 | 582.9 |
| Mexico | 3.1 | 0.9 | 0.9 | 1.7 | 1.9 | 3.6 | 4.7 | 4.8 | 7.8 | 6.8 | 6.1 |
| European Union | 54.2 | 60.3 | 87.8 | 58.3 | 51.5 | 65.7 | 70.3 | 106.6 | 126.7 | 192.6 | 126.9 |
| *United Kingdom* | *6.9* | *13.0* | *20.4* | *21.9* | *16.0* | *19.3* | *15.4* | *17.0* | *19.2* | *28.6* | *21.1* |
| *France* | *6.7* | *1.5* | *5.3* | *4.0* | *4.7* | *9.5* | *7.9* | *5.9* | *5.0* | *6.5* | *5.9* |
| *Germany* | *6.2* | *5.2* | *7.1* | *7.3* | *8.0* | *9.5* | *10.4* | *14.6* | *40.4* | *79.3* | *27.8* |
| *Italy* | *2.2* | *18.5* | *31.6* | *2.9* | *3.6* | *4.6* | *9.4* | *22.5* | *21.9* | *23.1* | *26.6* |
| *Netherlands* | *9.1* | *5.0* | *5.2* | *2.8* | *3.4* | *6.0* | *6.8* | *6.5* | *8.8* | *11.5* | *13.0* |
| Pacific Rim | 83.8 | 66.8 | 33.3 | 47.2 | 42.3 | 66.3 | 97.4 | 93.7 | 73.3 | 101.1 | 86.8 |
| *Hong Kong* | *12.0* | *6.5* | *6.2* | *3.3* | *6.2* | *10.9* | *14.9* | *9.8* | *5.0* | *8.6* | *14.7* |
| *Mainland China* | *17.7* | *2.3* | *3.0* | *4.1* | *10.3* | *14.5* | *23.3* | *17.6* | *14.4* | *21.6* | *13.7* |
| *Japan* | *5.2* | *30.4* | *9.7* | *22.0* | *7.3* | *11.1* | *20.0* | *19.7* | *16.1* | *23.3* | *11.1* |
| *South Korea* | *11.9* | *9.1* | *6.2* | *4.3* | *2.5* | *7.6* | *8.1* | *10.6* | *6.6* | *14.1* | *8.7* |
| *Taiwan* | *24.2* | *4.3* | *2.2* | *4.3* | *5.8* | *3.1* | *7.5* | *7.1* | *5.7* | *6.0* | *2.8* |
| All Other Countries | 18.9 | 22.1 | 29.7 | 19.3 | 32.8 | 41.8 | 45.6 | 64.0 | 63.1 | 70.0 | 62.5 |
| **Total** | **840.1** | **923.1** | **748.1** | **684.6** | **635.2** | **686.6** | **705.1** | **856.5** | **868.8** | **988.4** | **865.2** |
| **Total Exports** | | | | | | | | | | | |
| United States | 19,370.7 | 22,196.0 | 22,104.4 | 19,665.8 | 18,792.3 | 20,137.4 | 22,101.5 | 20,517.3 | 19,065.1 | 17,591.6 | 12,904.4 |
| Mexico | 42.2 | 57.7 | 83.2 | 79.0 | 108.6 | 198.4 | 237.0 | 185.3 | 195.8 | 342.5 | 162.8 |
| European Union | 1,942.3 | 2,597.7 | 2,143.6 | 1,817.8 | 1,882.9 | 2,186.0 | 2,452.8 | 2,255.4 | 2,318.0 | 2,603.5 | 1,673.8 |
| *United Kingdom* | *319.2* | *381.2* | *355.0* | *337.0* | *305.6* | *341.3* | *421.0* | *386.2* | *401.3* | *405.2* | *266.0* |
| *France* | *167.1* | *217.0* | *167.9* | *149.7* | *165.2* | *180.5* | *189.5* | *152.4* | *167.8* | *201.5* | *116.5* |
| *Germany* | *299.7* | *534.5* | *382.4* | *320.9* | *380.6* | *428.3* | *470.6* | *443.3* | *463.5* | *516.0* | *228.7* |
| *Italy* | *445.6* | *617.1* | *532.8* | *428.6* | *467.0* | *463.0* | *565.9* | *471.1* | *431.6* | *485.3* | *342.5* |
| *Netherlands* | *235.3* | *174.6* | *211.9* | *222.8* | *228.0* | *325.1* | *300.7* | *368.9* | *405.1* | *477.0* | *438.3* |
| Pacific Rim | 7,110.3 | 8,065.7 | 6,582.5 | 6,528.8 | 6,635.9 | 7,470.6 | 8,077.5 | 9,037.7 | 8,605.7 | 10,702.0 | 9,012.9 |
| *Hong Kong* | *265.0* | *277.8* | *217.8* | *207.7* | *179.8* | *252.1* | *213.2* | *199.2* | *166.3* | *236.0* | *210.0* |
| *Mainland China* | *582.3* | *706.4* | *726.8* | *756.3* | *919.5* | *1,225.4* | *1,325.5* | *1,485.6* | *1,722.8* | *1,999.7* | *2,477.5* |
| *Japan* | *4,466.7* | *4,890.8* | *4,066.1* | *3,858.5* | *3,660.0* | *3,805.1* | *4,163.8* | *4,709.8* | *4,134.6* | *5,026.1* | *3,460.4* |
| *South Korea* | *737.3* | *895.0* | *712.2* | *725.1* | *777.4* | *909.6* | *1,167.7* | *1,364.6* | *1,307.8* | *1,960.3* | *1,662.3* |
| *Taiwan* | *352.0* | *402.2* | *314.9* | *339.3* | *433.0* | *486.7* | *498.7* | *520.7* | *462.3* | *598.2* | *463.1* |
| All Other Countries | 578.3 | 722.3 | 765.9 | 737.0 | 844.6 | 1,015.4 | 1,298.5 | 1,470.3 | 1,327.4 | 1,914.9 | 1,334.2 |
| **Total** | **29,043.8** | **33,639.4** | **31,679.7** | **28,828.4** | **28,264.4** | **31,007.8** | **34,167.3** | **33,466.0** | **31,512.0** | **33,154.5** | **25,088.0** |

**% change from previous year**

| | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **High Technology Exports** | | | | | | | | | | |
| United States | 13.7 | -22.8 | -6.4 | -9.2 | 0.5 | -4.3 | 20.6 | 1.8 | 3.4 | -5.7 |
| Mexico | -69.9 | -5.8 | 93.4 | 9.5 | 88.7 | 31.4 | 2.8 | 62.6 | -13.8 | -9.2 |
| European Union | 11.1 | 45.7 | -33.7 | -11.6 | 27.6 | 6.9 | 51.7 | 18.9 | 52.0 | -34.1 |
| *United Kingdom* | *87.7* | *57.4* | *7.3* | *-26.8* | *20.6* | *-20.6* | *10.4* | *13.2* | *48.7* | *-26.2* |
| *France* | *-77.6* | *253.7* | *-24.1* | *17.3* | *102.7* | *-17.2* | *-24.8* | *-15.3* | *28.5* | *-8.2* |
| *Germany* | *-15.9* | *34.8* | *3.4* | *9.9* | *18.4* | *9.8* | *40.3* | *176.5* | *96.3* | *-65.0* |
| *Italy* | *725.8* | *70.8* | *-90.7* | *23.2* | *26.7* | *104.2* | *140.0* | *-2.6* | *5.5* | *15.1* |
| *Netherlands* | *-44.6* | *4.2* | *-45.9* | *20.2* | *75.4* | *13.6* | *-4.2* | *35.8* | *30.8* | *12.6* |
| Pacific Rim | -20.3 | -50.1 | 41.5 | -10.3 | 56.7 | 46.9 | -3.8 | -21.7 | 37.9 | -14.1 |
| *Hong Kong* | *-45.7* | *-5.2* | *-46.3* | *86.6* | *74.6* | *37.0* | *-34.0* | *-48.9* | *72.2* | *70.2* |
| *Mainland China* | *-87.0* | *29.5* | *36.6* | *152.5* | *40.6* | *60.7* | *-24.1* | *-18.6* | *50.0* | *-36.3* |
| *Japan* | *483.0* | *-68.0* | *127.1* | *-66.6* | *50.5* | *80.8* | *-1.5* | *-18.1* | *44.3* | *-52.5* |
| *South Korea* | *-23.9* | *-31.5* | *-31.5* | *-41.3* | *205.8* | *6.0* | *30.6* | *-37.2* | *112.0* | *-38.5* |
| *Taiwan* | *-82.4* | *-48.1* | *94.4* | *34.2* | *-46.0* | *139.9* | *-5.3* | *-19.0* | *5.3* | *-54.1* |
| All Other Countries | 16.9 | 34.2 | -35.0 | 70.1 | 27.4 | 9.2 | 40.2 | -1.5 | 11.1 | -10.8 |
| **Total Growth** | **9.9** | **-19.0** | **-8.5** | **-7.2** | **8.1** | **2.7** | **21.5** | **1.4** | **13.8** | **-12.5** |
| **Total Exports** | | | | | | | | | | |
| United States | 14.6 | -0.4 | -11.0 | -4.4 | 7.2 | 9.8 | -7.2 | -7.1 | -7.7 | -26.6 |
| Mexico | 36.7 | 44.3 | -5.1 | 37.4 | 82.7 | 19.5 | -21.8 | 5.7 | 75.0 | -52.5 |
| European Union | 33.7 | -17.5 | -15.2 | 3.6 | 16.1 | 12.2 | -8.0 | 2.8 | 12.3 | -35.7 |
| *United Kingdom* | *19.4* | *-6.9* | *-5.1* | *-9.3* | *11.7* | *23.3* | *-8.3* | *3.9* | *1.0* | *-34.3* |
| *France* | *29.9* | *-22.6* | *-10.9* | *10.3* | *9.3* | *5.0* | *-19.6* | *10.1* | *20.1* | *-42.2* |
| *Germany* | *78.4* | *-28.5* | *-16.1* | *18.6* | *12.5* | *9.9* | *-5.8* | *4.6* | *11.3* | *-55.7* |
| *Italy* | *38.5* | *-13.7* | *-19.6* | *9.0* | *-0.9* | *22.2* | *-16.7* | *-8.4* | *12.4* | *-29.4* |
| *Netherlands* | *-25.8* | *21.3* | *5.1* | *2.3* | *42.6* | *-7.5* | *22.7* | *9.8* | *17.8* | *-8.1* |
| Pacific Rim | 13.4 | -18.4 | -0.8 | 1.6 | 12.6 | 8.1 | 11.9 | -4.8 | 24.4 | -15.8 |
| *Hong Kong* | *4.8* | *-21.6* | *-4.6* | *-13.4* | *40.2* | *-15.5* | *-6.5* | *-16.5* | *41.9* | *-11.0* |
| *Mainland China* | *21.3* | *2.9* | *4.1* | *21.6* | *33.3* | *8.2* | *12.1* | *16.0* | *16.1* | *23.9* |
| *Japan* | *9.5* | *-16.9* | *-5.1* | *-5.1* | *4.0* | *9.4* | *13.1* | *-12.2* | *21.6* | *-31.2* |
| *South Korea* | *21.4* | *-20.4* | *1.8* | *7.2* | *17.0* | *28.4* | *16.9* | *-4.2* | *49.9* | *-15.2* |
| *Taiwan* | *14.3* | *-21.7* | *7.8* | *27.6* | *12.4* | *2.5* | *4.4* | *-11.2* | *29.4* | *-22.6* |
| All Other Countries | 24.9 | 6.0 | -3.8 | 14.6 | 20.2 | 27.9 | 13.2 | -9.7 | 44.3 | -30.3 |
| **Total Growth** | **15.8** | **-5.8** | **-9.0** | **-2.0** | **9.7** | **10.2** | **-2.1** | **-5.8** | **5.2** | **-24.3** |

1. High technology exports reflect exports of high technology commodities produced by the manufacturing portion of the high technology sector; exports from the high technology service industries are not included.

[r] Revised
[p] Preliminary

Source: BC Stats and Statistics Canada

## Table 28. B.C. Imports of High Technology, by Country of Origin, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| United States | 2,369.1 | 2,484.3 | 2,106.7 | 1,898.0 | 1,727.2 | 1,602.9 | 1,665.5 | 1,472.6 | 1,563.1 | 1,532.9 | 1,322.7 |
| Mexico | 128.8 | 163.1 | 184.0 | 216.7 | 227.8 | 278.4 | 328.3 | 402.4 | 500.8 | 564.6 | 496.2 |
| European Union | 654.7 | 626.4 | 865.5 | 763.2 | 495.9 | 416.8 | 375.4 | 398.7 | 406.9 | 493.0 | 465.0 |
| *United Kingdom* | *154.9* | *314.1* | *162.3* | *151.8* | *141.9* | *128.0* | *104.1* | *92.0* | *97.4* | *114.3* | *108.1* |
| *France* | *333.2* | *120.8* | *441.8* | *316.4* | *128.7* | *80.7* | *51.9* | *67.0* | *68.1* | *77.9* | *73.6* |
| *Germany* | *69.8* | *70.7* | *113.9* | *89.8* | *77.0* | *87.5* | *92.4* | *99.5* | *97.8* | *128.2* | *115.1* |
| *Italy* | *11.4* | *11.8* | *38.1* | *69.2* | *38.0* | *23.2* | *15.5* | *22.7* | *19.4* | *16.0* | *17.0* |
| *Netherlands* | *8.3* | *13.3* | *17.0* | *31.4* | *12.8* | *12.4* | *14.5* | *9.8* | *17.2* | *30.0* | *28.2* |
| Pacific Rim | 1,007.2 | 1,122.0 | 823.0 | 909.7 | 1,117.7 | 1,270.6 | 1,483.2 | 1,579.9 | 1,891.8 | 2,050.5 | 1,851.3 |
| *Hong Kong* | *24.5* | *27.7* | *10.8* | *10.0* | *10.8* | *6.3* | *9.7* | *10.9* | *11.1* | *12.5* | *10.6* |
| *Mainland China* | *73.2* | *101.7* | *131.8* | *202.2* | *339.4* | *487.5* | *666.4* | *787.3* | *969.3* | *1,100.8* | *1,086.6* |
| *Japan* | *336.8* | *359.1* | *246.5* | *241.3* | *242.7* | *248.7* | *282.0* | *234.4* | *262.3* | *270.5* | *204.0* |
| *South Korea* | *88.2* | *118.8* | *82.6* | *75.5* | *122.7* | *130.7* | *116.3* | *101.2* | *116.0* | *139.4* | *119.4* |
| *Taiwan* | *185.1* | *180.8* | *139.6* | *138.9* | *118.1* | *115.4* | *115.7* | *114.2* | *147.9* | *146.8* | *128.5* |
| All Other Countries | 236.7 | 307.1 | 302.2 | 260.4 | 183.7 | 197.8 | 341.1 | 225.7 | 289.3 | 247.9 | 222.0 |
| **Total Value** | **4,396.6** | **4,702.9** | **4,281.3** | **4,048.1** | **3,752.3** | **3,766.4** | **4,193.5** | **4,079.4** | **4,651.8** | **4,888.9** | **4,357.2** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| United States | 4.9 | -15.2 | -9.9 | -9.0 | -7.2 | 3.9 | -11.6 | 6.1 | -1.9 | -13.7 |
| Mexico | 26.6 | 12.8 | 17.8 | 5.1 | 22.2 | 17.9 | 22.6 | 24.4 | 12.8 | -12.1 |
| European Union | -4.3 | 38.2 | -11.8 | -35.0 | -16.0 | -9.9 | 6.2 | 2.1 | 21.2 | -5.7 |
| *United Kingdom* | *102.8* | *-48.3* | *-6.5* | *-6.5* | *-9.7* | *-18.7* | *-11.7* | *5.9* | *17.3* | *-5.4* |
| *France* | *-63.7* | *265.7* | *-28.4* | *-59.3* | *-37.2* | *-35.7* | *29.1* | *1.7* | *14.3* | *-5.5* |
| *Germany* | *1.2* | *61.2* | *-21.1* | *-14.3* | *13.8* | *5.6* | *7.6* | *-1.7* | *31.1* | *-10.2* |
| *Italy* | *3.9* | *222.4* | *81.6* | *-45.0* | *-38.9* | *-33.5* | *46.7* | *-14.4* | *-17.4* | *5.9* |
| *Netherlands* | *59.9* | *27.9* | *84.5* | *-59.1* | *-3.5* | *17.3* | *-32.3* | *74.7* | *74.9* | *-6.1* |
| Pacific Rim | 11.4 | -26.7 | 10.5 | 22.9 | 13.7 | 16.7 | 6.5 | 19.7 | 8.4 | -9.7 |
| *Hong Kong* | *13.2* | *-61.0* | *-8.0* | *8.3* | *-41.6* | *53.7* | *12.4* | *1.8* | *12.4* | *-14.8* |
| *Mainland China* | *38.9* | *29.6* | *53.4* | *67.8* | *43.6* | *36.7* | *18.1* | *23.1* | *13.6* | *-1.3* |
| *Japan* | *6.6* | *-31.3* | *-2.1* | *0.6* | *2.5* | *13.4* | *-16.9* | *11.9* | *3.1* | *-24.6* |
| *South Korea* | *34.7* | *-30.5* | *-8.5* | *62.4* | *6.5* | *-11.0* | *-13.0* | *14.6* | *20.2* | *-14.3* |
| *Taiwan* | *-2.3* | *-22.8* | *-0.5* | *-15.0* | *-2.2* | *0.3* | *-1.3* | *29.5* | *-0.8* | *-12.5* |
| All Other Countries | 29.8 | -1.6 | -13.8 | -29.5 | 7.7 | 72.5 | -33.8 | 28.2 | -14.3 | -10.4 |
| **Total Growth** | **7.0** | **-9.0** | **-5.4** | **-7.3** | **0.4** | **11.3** | **-2.7** | **14.0** | **5.1** | **-10.9** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 29. B.C. Balance of Trade in High Technology Goods, by Country, 1999-2009

**Balance ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| United States | -1,291.7 | -912.5 | -1,238.5 | -1,104.4 | -999.1 | -862.8 | -932.7 | -656.2 | -897.5 | -914.9 | -739.8 |
| Mexico | -125.5 | -162.1 | -182.8 | -213.0 | -224.1 | -271.4 | -320.2 | -391.9 | -488.8 | -555.3 | -489.4 |
| European Union | -581.9 | -514.7 | -747.0 | -681.6 | -409.0 | -307.0 | -240.9 | -202.4 | -239.5 | -269.8 | -307.9 |
| *United Kingdom* | *-144.7* | *-289.0* | *-118.5* | *-119.6* | *-111.4* | *-86.7* | *-69.1* | *-62.6* | *-72.1* | *-76.4* | *-80.5* |
| *France* | *-317.6* | *-103.5* | *-435.9* | *-311.1* | *-123.5* | *-67.8* | *-42.1* | *-37.6* | *-62.2* | *-70.5* | *-65.5* |
| *Germany* | *-61.0* | *-54.9* | *-105.6* | *-76.4* | *-64.1* | *-73.4* | *-61.9* | *-55.3* | *-40.4* | *-39.2* | *-78.9* |
| *Italy* | *-8.9* | *6.7* | *-3.7* | *-65.0* | *-34.1* | *-18.1* | *-6.0* | *0.1* | *2.8* | *7.6* | *9.8* |
| *Netherlands* | *1.8* | *-8.2* | *-11.7* | *-28.2* | *-7.1* | *-5.7* | *0.2* | *5.0* | *1.5* | *-14.9* | *-14.3* |
| Pacific Rim | -864.4 | -903.3 | -713.0 | -805.3 | -954.5 | -1,031.6 | -1,181.0 | -1,303.0 | -1,636.9 | -1,862.1 | -1,727.0 |
| *Hong Kong* | *7.1* | *30.2* | *30.6* | *14.1* | *27.7* | *42.4* | *69.5* | *45.3* | *32.1* | *12.4* | *7.5* |
| *Mainland China* | *-54.1* | *-88.9* | *-121.6* | *-194.8* | *-307.1* | *-458.5* | *-630.7* | *-754.1* | *-921.5* | *-1,059.5* | *-1,065.8* |
| *Japan* | *-319.7* | *-287.2* | *-221.2* | *-204.4* | *-213.4* | *-214.9* | *-231.8* | *-190.6* | *-226.0* | *-241.5* | *-190.2* |
| *South Korea* | *-66.2* | *-99.8* | *-71.9* | *-66.2* | *-113.4* | *-108.4* | *-99.4* | *-81.1* | *-101.3* | *-119.9* | *-108.5* |
| *Taiwan* | *-157.1* | *-171.7* | *-133.7* | *-133.6* | *-110.2* | *-105.7* | *-98.7* | *-99.2* | *-136.8* | *-137.8* | *-124.9* |
| All Other Countries | -211.1 | -272.7 | -264.5 | -234.8 | -144.4 | -129.8 | -244.4 | -126.0 | -169.1 | -152.4 | -70.9 |
| **Total** | **-3,074.5** | **-2,765.4** | **-3,145.9** | **-3,039.1** | **-2,731.1** | **-2,602.6** | **-2,919.2** | **-2,679.4** | **-3,431.9** | **-3,754.6** | **-3,335.0** |

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 30. B.C. Domestic Exports of High Technology Goods, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 2.4 | 1.5 | 1.6 | 1.7 | 2.0 | 4.3 | 7.9 | 7.2 | 4.1 | 2.9 | 3.5 |
| Life Sciences | 69.4 | 82.0 | 94.8 | 186.2 | 200.8 | 210.6 | 140.2 | 179.4 | 132.7 | 132.0 | 141.2 |
| Opto-Electronics | 91.5 | 167.5 | 121.1 | 70.9 | 35.3 | 34.0 | 35.7 | 37.1 | 49.7 | 124.2 | 48.3 |
| Computers and Telecommunications | 399.9 | 318.6 | 259.8 | 262.3 | 243.1 | 259.4 | 286.4 | 345.0 | 395.9 | 416.4 | 401.0 |
| Electronics | 9.5 | 14.2 | 18.1 | 4.6 | 4.1 | 8.9 | 15.4 | 14.1 | 6.4 | 11.9 | 34.7 |
| Computer Integrated Manufacturing | 44.5 | 51.6 | 56.3 | 47.5 | 62.5 | 97.5 | 104.1 | 101.0 | 94.0 | 109.8 | 89.8 |
| Material Design | 94.0 | 178.6 | 71.0 | 3.2 | 1.5 | 1.4 | 1.9 | 2.1 | 2.7 | 1.5 | 1.4 |
| Aerospace | 126.6 | 102.9 | 118.9 | 104.5 | 83.9 | 69.1 | 109.6 | 170.4 | 182.9 | 189.4 | 142.8 |
| Weapons and Nuclear | 2.3 | 6.3 | 6.5 | 3.9 | 2.0 | 1.4 | 4.1 | 0.2 | 0.4 | 0.5 | 2.7 |
| **Total** | **840.1** | **923.1** | **748.1** | **684.6** | **635.2** | **686.6** | **705.1** | **856.5** | **868.8** | **988.4** | **865.2** |

**% change from previous year**

| | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | -37.9 | 5.0 | 6.1 | 19.1 | 112.5 | 83.9 | -8.5 | -43.8 | -29.8 | 22.1 |
| Life Sciences | 18.1 | 15.7 | 96.3 | 7.8 | 4.9 | -33.4 | 28.0 | -26.0 | -0.6 | 7.0 |
| Opto-Electronics | 82.9 | -27.7 | -41.5 | -50.3 | -3.6 | 4.9 | 4.1 | 33.9 | 149.8 | -61.2 |
| Computers and Telecommunications | -20.3 | -18.5 | 0.9 | -7.3 | 6.7 | 10.4 | 20.5 | 14.7 | 5.2 | -3.7 |
| Electronics | 48.5 | 27.6 | -74.7 | -9.7 | 114.3 | 72.9 | -8.4 | -54.5 | 85.7 | 192.0 |
| Computer Integrated Manufacturing | 15.9 | 9.2 | -15.7 | 31.6 | 56.1 | 6.7 | -3.0 | -7.0 | 16.9 | -18.2 |
| Material Design | 90.0 | -60.3 | -95.5 | -53.1 | -2.5 | 29.5 | 13.5 | 27.1 | -44.0 | -8.9 |
| Aerospace | -18.7 | 15.6 | -12.1 | -19.7 | -17.7 | 58.7 | 55.5 | 7.3 | 3.5 | -24.6 |
| Weapons and Nuclear | 178.5 | 2.0 | -40.2 | -48.1 | -29.9 | 191.0 | -96.3 | 174.8 | 13.3 | 473.1 |
| **Total** | **9.9** | **-19.0** | **-8.5** | **-7.2** | **8.1** | **2.7** | **21.5** | **1.4** | **13.8** | **-12.5** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 31. B.C. Imports of High Technology Goods, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 34.6 | 36.6 | 56.5 | 53.3 | 46.8 | 34.3 | 35.3 | 43.8 | 59.9 | 83.1 | 96.2 |
| Life Sciences | 331.6 | 404.6 | 460.9 | 484.2 | 464.2 | 457.6 | 477.2 | 498.4 | 508.2 | 605.1 | 581.6 |
| Opto-Electronics | 94.4 | 135.7 | 127.6 | 117.1 | 106.3 | 123.5 | 205.2 | 299.6 | 337.7 | 420.0 | 356.4 |
| Computers and Telecommunications | 2,128.6 | 2,305.7 | 2,051.4 | 2,148.6 | 2,255.0 | 2,394.5 | 2,425.1 | 2,359.8 | 2,747.7 | 2,837.7 | 2,518.4 |
| Electronics | 834.3 | 924.8 | 272.2 | 194.1 | 174.0 | 140.4 | 245.7 | 253.0 | 267.0 | 273.0 | 245.2 |
| Computer Integrated Manufacturing | 150.2 | 185.8 | 179.9 | 191.0 | 204.9 | 188.4 | 181.6 | 195.6 | 159.0 | 145.2 | 110.6 |
| Material Design | 145.8 | 101.9 | 62.3 | 27.8 | 20.0 | 26.6 | 17.1 | 24.3 | 18.0 | 19.7 | 21.2 |
| Aerospace | 653.7 | 572.0 | 1,030.3 | 800.2 | 449.4 | 361.5 | 591.0 | 385.2 | 537.5 | 484.8 | 404.1 |
| Weapons and Nuclear | 23.4 | 35.7 | 40.2 | 31.9 | 31.7 | 39.5 | 15.3 | 19.6 | 16.8 | 20.3 | 23.4 |
| **Total** | **4,396.6** | **4,702.9** | **4,281.3** | **4,048.1** | **3,752.3** | **3,766.4** | **4,193.5** | **4,079.4** | **4,651.8** | **4,888.9** | **4,357.2** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 5.8 | 54.4 | -5.7 | -12.2 | -26.8 | 3.1 | 23.9 | 36.9 | 38.6 | 15.8 |
| Life Sciences | 22.0 | 13.9 | 5.0 | -4.1 | -1.4 | 4.3 | 4.5 | 2.0 | 19.1 | -3.9 |
| Opto-Electronics | 43.8 | -5.9 | -8.2 | -9.2 | 16.2 | 66.1 | 46.0 | 12.7 | 24.4 | -15.1 |
| Computers and Telecommunications | 8.3 | -11.0 | 4.7 | 5.0 | 6.2 | 1.3 | -2.7 | 16.4 | 3.3 | -11.3 |
| Electronics | 10.9 | -70.6 | -28.7 | -10.3 | -19.3 | 75.0 | 3.0 | 5.5 | 2.2 | -10.2 |
| Computer Integrated Manufacturing | 23.7 | -3.2 | 6.2 | 7.3 | -8.0 | -3.6 | 7.7 | -18.7 | -8.7 | -23.8 |
| Material Design | -30.1 | -38.9 | -55.3 | -28.1 | 33.1 | -35.7 | 42.0 | -26.0 | 9.8 | 7.4 |
| Aerospace | -12.5 | 80.1 | -22.3 | -43.8 | -19.6 | 63.5 | -34.8 | 39.5 | -9.8 | -16.6 |
| Weapons and Nuclear | 52.7 | 12.5 | -20.6 | -0.7 | 24.6 | -61.2 | 28.3 | -14.5 | 20.8 | 15.6 |
| **Total** | **7.0** | **-9.0** | **-5.4** | **-7.3** | **0.4** | **11.3** | **-2.7** | **14.0** | **5.1** | **-10.9** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 32. B.C. Balance of Trade in High Technology Goods, by Commodity Group, 1999-2009

| | Balance ($000,000) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | -32.1 | -35.1 | -54.8 | -51.6 | -44.8 | -30.0 | -27.4 | -36.6 | -55.9 | -80.2 | -92.7 |
| Life Sciences | -259.2 | -319.6 | -363.5 | -293.9 | -257.7 | -239.5 | -327.6 | -312.5 | -369.8 | -468.7 | -436.5 |
| Opto-Electronics | -1.2 | 34.5 | -3.0 | -42.8 | -69.5 | -86.7 | -165.6 | -258.5 | -286.1 | -294.0 | -304.4 |
| Computers and Telecommunications | -1,662.8 | -1,905.7 | -1,715.6 | -1,807.6 | -1,936.1 | -2,061.1 | -2,046.5 | -1,905.5 | -2,294.1 | -2,388.5 | -2,088.5 |
| Electronics | -460.0 | -42.7 | 9.8 | -4.2 | 67.9 | 171.5 | 116.1 | 91.8 | -70.2 | -205.1 | -203.5 |
| Computer Integrated Manufacturing | -102.7 | -126.1 | -115.4 | -138.9 | -133.0 | -80.0 | -67.6 | -80.4 | -58.3 | -31.2 | -18.5 |
| Material Design | -51.6 | 77.0 | 13.3 | -22.9 | -16.6 | -24.8 | -13.2 | -21.0 | -14.4 | -18.1 | -19.7 |
| Aerospace | -485.3 | -420.5 | -883.5 | -650.2 | -312.5 | -217.3 | -376.9 | -138.3 | -267.7 | -249.5 | -151.1 |
| Weapons and Nuclear | -19.6 | -27.2 | -33.1 | -27.1 | -28.9 | -34.7 | -10.5 | -18.5 | -15.5 | -19.1 | -20.1 |
| **Total** | **-3,074.5** | **-2,765.4** | **-3,145.9** | **-3,039.1** | **-2,731.1** | **-2,602.6** | **-2,919.2** | **-2,679.4** | **-3,431.9** | **-3,754.6** | **-3,335.0** |

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 33. B.C. Domestic Exports of High Technology Goods to the United States, by Commodity Group, 1999-2009

| | Value ($000,000) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | 0.7 | 0.6 | 1.5 | 1.6 | 1.4 | 1.8 | 3.3 | 2.0 | 1.3 | 0.3 | 1.0 |
| Life Sciences | 59.6 | 71.5 | 85.8 | 167.6 | 174.5 | 172.3 | 103.4 | 124.1 | 79.7 | 73.6 | 88.9 |
| Opto-Electronics | 77.5 | 135.3 | 89.8 | 54.2 | 25.3 | 22.1 | 19.9 | 18.7 | 21.8 | 25.2 | 14.1 |
| Computers and Telecommunications | 285.0 | 250.9 | 206.7 | 219.0 | 186.4 | 197.4 | 204.2 | 229.7 | 277.3 | 292.7 | 282.5 |
| Electronics | 6.7 | 9.9 | 14.4 | 2.3 | 2.5 | 3.2 | 4.0 | 3.7 | 2.6 | 4.8 | 31.3 |
| Computer Integrated Manufacturing | 35.7 | 40.9 | 49.5 | 39.0 | 45.4 | 56.1 | 62.4 | 58.3 | 57.9 | 65.5 | 47.4 |
| Material Design | 93.9 | 178.3 | 50.3 | 3.1 | 1.2 | 1.3 | 1.5 | 0.9 | 0.6 | 0.8 | 0.9 |
| Aerospace | 120.2 | 83.9 | 92.5 | 70.0 | 69.1 | 54.5 | 88.2 | 150.0 | 156.4 | 154.8 | 116.0 |
| Weapons and Nuclear | 0.8 | 1.7 | 6.0 | 1.3 | 0.8 | 0.4 | 0.2 | 0.1 | 0.3 | 0.3 | 0.9 |
| **Total** | **680.0** | **773.0** | **596.4** | **558.1** | **506.6** | **509.3** | **487.1** | **587.5** | **597.8** | **617.9** | **582.9** |

| | % change from previous year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | -9.6 | 135.6 | 8.3 | -13.3 | 32.8 | 82.9 | -40.3 | -33.3 | -79.2 | 254.5 |
| Life Sciences | 20.0 | 19.9 | 95.5 | 4.1 | -1.3 | -40.0 | 20.1 | -35.8 | -7.6 | 20.7 |
| Opto-Electronics | 74.6 | -33.6 | -39.7 | -53.4 | -12.5 | -10.1 | -6.1 | 16.5 | 15.6 | -43.9 |
| Computers and Telecommunications | -12.0 | -17.6 | 6.0 | -14.9 | 5.9 | 3.4 | 12.5 | 20.7 | 5.6 | -3.5 |
| Electronics | 48.4 | 45.3 | -84.1 | 8.9 | 29.0 | 25.4 | -9.0 | -29.9 | 87.5 | 547.9 |
| Computer Integrated Manufacturing | 14.6 | 21.1 | -21.2 | 16.5 | 23.5 | 11.1 | -6.5 | -0.7 | 13.1 | -27.6 |
| Material Design | 89.9 | -71.8 | -93.8 | -63.2 | 13.6 | 14.6 | -41.6 | -27.8 | 20.5 | 16.0 |
| Aerospace | -30.2 | 10.3 | -24.4 | -1.2 | -21.1 | 61.8 | 70.0 | 4.3 | -1.0 | -25.1 |
| Weapons and Nuclear | 101.3 | 261.3 | -78.5 | -37.2 | -50.2 | -43.1 | -54.3 | 181.1 | -7.1 | 217.7 |
| **Total** | **13.7** | **-22.8** | **-6.4** | **-9.2** | **0.5** | **-4.3** | **20.6** | **1.8** | **3.4** | **-5.7** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 34. B.C. Imports of High Technology Goods from the United States, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 22.1 | 17.6 | 21.4 | 22.4 | 21.6 | 17.8 | 17.0 | 19.2 | 22.8 | 23.7 | 22.8 |
| Life Sciences | 196.0 | 247.7 | 262.6 | 282.6 | 258.9 | 246.9 | 238.1 | 246.8 | 252.5 | 251.0 | 272.4 |
| Opto-Electronics | 48.1 | 67.1 | 57.9 | 48.3 | 32.5 | 35.8 | 34.9 | 40.9 | 29.0 | 39.0 | 27.9 |
| Computers and Telecommunications | 1,216.3 | 1,227.7 | 1,020.7 | 967.1 | 925.2 | 866.6 | 828.5 | 705.0 | 718.8 | 698.8 | 594.2 |
| Electronics | 363.2 | 406.3 | 131.7 | 100.3 | 85.0 | 69.4 | 121.6 | 98.0 | 106.1 | 100.4 | 83.0 |
| Computer Integrated Manufacturing | 113.0 | 131.9 | 123.7 | 128.6 | 131.3 | 118.9 | 104.5 | 123.3 | 88.3 | 75.5 | 57.0 |
| Material Design | 130.2 | 78.9 | 38.3 | 21.3 | 14.3 | 18.4 | 11.2 | 16.2 | 10.7 | 13.5 | 14.6 |
| Aerospace | 265.3 | 285.1 | 425.8 | 305.7 | 236.7 | 204.7 | 301.4 | 211.8 | 324.9 | 319.9 | 237.6 |
| Weapons and Nuclear | 14.8 | 21.9 | 24.7 | 21.7 | 21.7 | 24.5 | 8.3 | 11.4 | 9.9 | 11.1 | 13.3 |
| **Total** | **2,369.1** | **2,484.3** | **2,106.7** | **1,898.0** | **1,727.2** | **1,602.9** | **1,665.5** | **1,472.6** | **1,563.1** | **1,532.9** | **1,322.7** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | -20.4 | 21.5 | 4.8 | -3.7 | -17.6 | -4.5 | 13.2 | 18.8 | 3.9 | -4.0 |
| Life Sciences | 26.4 | 6.0 | 7.6 | -8.4 | -4.7 | -3.6 | 3.7 | 2.3 | -0.6 | 8.5 |
| Opto-Electronics | 39.6 | -13.7 | -16.6 | -32.8 | 10.2 | -2.5 | 17.2 | -29.2 | 34.5 | -28.5 |
| Computers and Telecommunications | 0.9 | -16.9 | -5.2 | -4.3 | -6.3 | -4.4 | -14.9 | 2.0 | -2.8 | -15.0 |
| Electronics | 11.9 | -67.6 | -23.8 | -15.2 | -18.4 | 75.3 | -19.4 | 8.2 | -5.4 | -17.3 |
| Computer Integrated Manufacturing | 16.7 | -6.2 | 4.0 | 2.1 | -9.4 | -12.1 | 17.9 | -28.3 | -14.5 | -24.5 |
| Material Design | -39.4 | -51.4 | -44.5 | -32.5 | 28.0 | -39.0 | 44.6 | -34.0 | 26.1 | 8.1 |
| Aerospace | 7.5 | 49.4 | -28.2 | -22.6 | -13.5 | 47.3 | -29.7 | 53.4 | -1.5 | -25.7 |
| Weapons and Nuclear | 47.6 | 12.6 | -12.0 | -0.2 | 13.2 | -65.9 | 36.3 | -12.6 | 11.3 | 20.1 |
| **Total** | **4.9** | **-15.2** | **-9.9** | **-9.0** | **-7.2** | **3.9** | **-11.6** | **6.1** | **-1.9** | **-13.7** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 35. B.C. Balance of Trade in High Technology Goods with the United States, by Commodity Group, 1999-2009

**Balance ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | -21.4 | -17.0 | -19.9 | -20.8 | -20.2 | -16.0 | -13.5 | -17.2 | -21.5 | -23.5 | -21.8 |
| Life Sciences | -133.7 | -173.3 | -174.6 | -111.8 | -80.5 | -69.0 | -129.6 | -118.3 | -171.3 | -177.4 | -183.5 |
| Opto-Electronics | 30.8 | 70.5 | 35.0 | 8.0 | -6.1 | -11.5 | -11.9 | -19.7 | -6.5 | -13.8 | -13.8 |
| Computers and Telecommunications | -876.8 | -909.6 | -748.0 | -679.3 | -679.0 | -608.6 | -553.7 | -386.9 | -407.8 | -406.1 | -311.7 |
| Electronics | -54.5 | 288.9 | 57.0 | 27.7 | 24.5 | 71.4 | 18.4 | 12.9 | -83.0 | -95.5 | -51.7 |
| Computer Integrated Manufacturing | -74.4 | -83.0 | -66.3 | -85.3 | -77.3 | -54.9 | -35.2 | -56.3 | -27.4 | -10.0 | -9.6 |
| Material Design | -36.1 | 99.8 | 14.5 | -16.5 | -11.5 | -16.8 | -9.5 | -14.7 | -9.8 | -12.7 | -13.7 |
| Aerospace | -112.7 | -170.2 | -318.2 | -206.9 | -128.3 | -133.4 | -189.8 | -45.3 | -160.8 | -165.1 | -121.6 |
| Weapons and Nuclear | -12.8 | -18.5 | -18.1 | -19.6 | -20.7 | -23.9 | -7.9 | -10.8 | -9.4 | -10.8 | -12.4 |
| **Total** | **-1,291.7** | **-912.5** | **-1,238.5** | **-1,104.4** | **-999.1** | **-862.8** | **-932.7** | **-656.2** | **-897.5** | **-914.9** | **-739.8** |

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 36. B.C. Domestic Exports of High Technology Goods to the Pacific Rim, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 0.0 | 0.3 | 0.0 | 0.0 | 0.1 | 0.5 | 0.7 | 0.1 | 0.1 | 0.2 | 0.2 |
| Life Sciences | 3.5 | 4.0 | 2.8 | 1.9 | 4.9 | 7.7 | 13.1 | 13.0 | 6.6 | 12.6 | 11.5 |
| Opto-Electronics | 2.3 | 11.9 | 4.3 | 11.0 | 4.4 | 4.8 | 8.7 | 5.1 | 4.5 | 6.1 | 5.4 |
| Computers and Telecommunications | 68.7 | 37.8 | 18.4 | 14.5 | 20.1 | 29.4 | 39.9 | 45.0 | 37.1 | 42.3 | 48.6 |
| Electronics | 2.1 | 3.2 | 2.6 | 1.7 | 1.1 | 3.2 | 10.3 | 9.3 | 3.1 | 5.3 | 1.4 |
| Computer Integrated Manufacturing | 5.3 | 5.3 | 3.4 | 3.4 | 6.8 | 14.4 | 14.7 | 15.9 | 9.0 | 15.9 | 11.9 |
| Material Design | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.1 | 0.1 |
| Aerospace | 1.5 | 2.2 | 1.6 | 13.1 | 4.0 | 6.0 | 6.2 | 5.0 | 12.5 | 18.5 | 6.1 |
| Weapons and Nuclear | 0.4 | 2.0 | 0.1 | 1.7 | 0.9 | 0.3 | 3.8 | 0.0 | 0.1 | 0.1 | 1.7 |
| **Total** | **83.8** | **66.8** | **33.3** | **47.2** | **42.3** | **66.3** | **97.4** | **93.7** | **73.3** | **101.1** | **86.8** |

**% change from previous year**

| | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 1624.6 | -91.7 | -77.4 | 2547.2 | 240.5 | 44.5 | -81.3 | -13.7 | 35.3 | 28.0 |
| Life Sciences | 15.2 | -30.3 | -33.0 | 159.8 | 57.7 | 68.9 | -0.5 | -49.2 | 89.9 | -8.6 |
| Opto-Electronics | 418.2 | -64.2 | 157.3 | -60.2 | 9.2 | 82.0 | -41.0 | -11.7 | 34.9 | -12.1 |
| Computers and Telecommunications | -45.0 | -51.3 | -21.3 | 38.9 | 46.2 | 35.8 | 12.8 | -17.5 | 14.0 | 14.8 |
| Electronics | 54.5 | -20.1 | -35.2 | -35.3 | 194.3 | 225.9 | -9.4 | -66.9 | 72.9 | -74.5 |
| Computer Integrated Manufacturing | 0.0 | -35.2 | -1.6 | 101.2 | 112.3 | 2.1 | 8.6 | -43.8 | 77.5 | -25.2 |
| Material Design | - | 830.4 | -96.5 | 642.9 | 19.5 | -43.4 | 323.2 | 190.3 | -73.5 | -6.2 |
| Aerospace | 49.8 | -26.3 | 699.1 | -69.2 | 47.9 | 4.2 | -19.9 | 151.3 | 48.4 | -67.0 |
| Weapons and Nuclear | 390.5 | -96.6 | 2424.9 | -50.2 | -60.2 | 1003.7 | -99.2 | 93.5 | 78.9 | 1493.3 |
| **Total** | **-20.3** | **-50.1** | **41.5** | **-10.3** | **56.7** | **46.9** | **-3.8** | **-21.7** | **37.9** | **-14.1** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 37. B.C. Imports of High Technology Goods from the Pacific Rim, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 2.2 | 3.3 | 1.9 | 2.8 | 2.0 | 1.1 | 0.8 | 0.7 | 1.0 | 0.8 | 1.0 |
| Life Sciences | 22.2 | 23.0 | 33.4 | 29.1 | 29.6 | 35.4 | 39.0 | 40.8 | 44.8 | 59.2 | 57.9 |
| Opto-Electronics | 40.4 | 58.1 | 56.3 | 53.4 | 59.3 | 69.8 | 109.4 | 120.8 | 81.6 | 95.9 | 91.2 |
| Computers and Telecommunications | 603.7 | 612.2 | 580.6 | 713.1 | 912.4 | 1,062.9 | 1,178.6 | 1,248.6 | 1,580.5 | 1,697.4 | 1,527.2 |
| Electronics | 289.1 | 358.7 | 94.0 | 65.4 | 62.0 | 49.4 | 89.4 | 113.4 | 120.0 | 130.1 | 119.9 |
| Computer Integrated Manufacturing | 20.5 | 29.1 | 25.0 | 26.5 | 36.8 | 30.2 | 40.1 | 31.2 | 35.2 | 38.4 | 27.2 |
| Material Design | 9.0 | 10.5 | 10.4 | 2.0 | 1.6 | 2.0 | 1.7 | 2.8 | 2.0 | 2.2 | 2.6 |
| Aerospace | 18.7 | 25.4 | 19.2 | 15.4 | 11.7 | 17.3 | 22.4 | 19.8 | 24.8 | 24.8 | 22.2 |
| Weapons and Nuclear | 1.4 | 1.6 | 2.1 | 1.9 | 2.3 | 2.4 | 1.7 | 1.7 | 1.8 | 1.7 | 2.2 |
| **Total** | **1,007.2** | **1,122.0** | **823.0** | **909.7** | **1,117.7** | **1,270.6** | **1,483.2** | **1,579.9** | **1,891.8** | **2,050.5** | **1,851.3** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 48.3 | -41.2 | 46.8 | -29.1 | -43.5 | -31.9 | -7.2 | 42.8 | -20.3 | 18.6 |
| Life Sciences | 3.6 | 45.0 | -12.8 | 1.6 | 19.6 | 10.3 | 4.6 | 9.8 | 32.0 | -2.2 |
| Opto-Electronics | 43.9 | -3.1 | -5.3 | 11.1 | 17.8 | 56.6 | 10.5 | -32.5 | 17.5 | -4.9 |
| Computers and Telecommunications | 1.4 | -5.2 | 22.8 | 27.9 | 16.5 | 10.9 | 5.9 | 26.6 | 7.4 | -10.0 |
| Electronics | 24.1 | -73.8 | -30.4 | -5.3 | -20.2 | 80.7 | 26.9 | 5.8 | 8.4 | -7.8 |
| Computer Integrated Manufacturing | 42.1 | -14.1 | 6.1 | 38.9 | -18.1 | 32.9 | -22.2 | 12.7 | 9.1 | -29.1 |
| Material Design | 17.0 | -0.8 | -80.5 | -19.2 | 20.0 | -12.6 | 62.4 | -26.6 | 6.6 | 17.9 |
| Aerospace | 35.7 | -24.2 | -19.8 | -24.2 | 48.3 | 29.4 | -11.6 | 25.0 | 0.0 | -10.6 |
| Weapons and Nuclear | 14.2 | 27.2 | -7.3 | 18.2 | 5.2 | -27.1 | -2.8 | 6.2 | -3.4 | 24.5 |
| **Total** | **11.4** | **-26.7** | **10.5** | **22.9** | **13.7** | **16.7** | **6.5** | **19.7** | **8.4** | **-9.7** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 38. B.C. Balance of Trade in High Technology Goods with the Pacific Rim, by Commodity Group, 1999-2009

| | Balance ($000,000) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | -2.2 | -3.0 | -1.9 | -2.8 | -1.9 | -0.7 | -0.1 | -0.6 | -0.9 | -0.7 | -0.8 |
| Life Sciences | -18.5 | -18.8 | -30.4 | -26.8 | -23.7 | -26.5 | -25.4 | -26.7 | -36.7 | -45.2 | -45.0 |
| Opto-Electronics | -38.1 | -46.2 | -52.0 | -42.3 | -54.9 | -64.8 | -100.4 | -115.7 | -76.5 | -89.0 | -85.4 |
| Computers and Telecommunications | -528.0 | -571.6 | -558.7 | -695.3 | -883.7 | -1,028.6 | -1,132.1 | -1,194.8 | -1,535.5 | -1,643.4 | -1,470.7 |
| Electronics | -238.2 | -210.4 | -22.5 | -12.7 | 45.4 | 83.5 | 89.7 | 59.1 | 31.2 | -77.9 | -113.2 |
| Computer Integrated Manufacturing | -15.1 | -23.8 | -21.5 | -23.0 | -29.6 | -13.5 | -23.9 | -14.3 | -23.2 | -18.9 | -14.4 |
| Material Design | -9.0 | -10.5 | -8.2 | -2.0 | -1.6 | -1.9 | -1.4 | -2.3 | -1.7 | -2.0 | -2.4 |
| Aerospace | -14.4 | -19.7 | -15.8 | -0.3 | -3.3 | 23.0 | 10.5 | -6.0 | 7.9 | 16.6 | 5.2 |
| Weapons and Nuclear | -0.9 | 0.5 | -2.0 | -0.2 | -1.3 | -2.0 | 2.1 | -1.7 | -1.6 | -1.6 | -0.3 |
| **Total** | **-864.4** | **-903.3** | **-713.0** | **-805.3** | **-954.5** | **-1,031.6** | **-1,181.0** | **-1,303.0** | **-1,636.9** | **-1,862.1** | **-1,727.0** |

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 39. B.C. Domestic Exports of High Technology Goods to Mainland China, by Commodity Group, 1999-2009

| | Value ($000,000) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Life Sciences | 0.2 | 0.4 | 1.5 | 0.8 | 3.0 | 2.0 | 6.2 | 6.3 | 2.8 | 7.4 | 3.1 |
| Opto-Electronics | 0.1 | 0.0 | 0.2 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 | 1.0 | 0.8 | 2.3 |
| Computers and Telecommunications | 17.1 | 1.5 | 1.2 | 1.9 | 4.6 | 9.4 | 11.9 | 8.4 | 8.1 | 7.3 | 5.1 |
| Electronics | 0.0 | 0.1 | 0.0 | 0.2 | 0.4 | 0.2 | 1.4 | 0.2 | 0.3 | 2.4 | 0.5 |
| Computer Integrated Manufacturing | 0.2 | 0.1 | 0.1 | 1.0 | 1.5 | 2.4 | 3.3 | 2.4 | 1.6 | 2.1 | 2.0 |
| Material Design | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aerospace | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.2 | 0.5 | 1.6 | 0.8 |
| Weapons and Nuclear | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| **Total** | **17.7** | **2.3** | **3.0** | **4.1** | **10.3** | **14.5** | **23.3** | **17.6** | **14.4** | **21.6** | **13.7** |

| | % change from previous year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | - | -100.0 | - | - | 523.0 | 39.9 | 80.9 | -100.0 | - | - |
| Life Sciences | 66.3 | 281.7 | -44.6 | 267.8 | -32.3 | 207.3 | 1.3 | -55.3 | 164.2 | -57.6 |
| Opto-Electronics | -41.3 | 269.7 | -32.1 | 31.1 | -22.5 | 137.0 | -39.5 | 435.0 | -17.6 | 185.5 |
| Computers and Telecommunications | -91.1 | -22.1 | 63.0 | 136.7 | 105.9 | 26.6 | -29.4 | -3.2 | -10.5 | -30.2 |
| Electronics | 89.9 | -84.1 | 2111.9 | 49.8 | -48.5 | 645.3 | -87.3 | 102.2 | 598.9 | -81.2 |
| Computer Integrated Manufacturing | -57.0 | -16.0 | 1298.3 | 62.2 | 53.7 | 37.9 | -27.7 | -33.0 | 33.6 | -5.1 |
| Material Design | - | - | -99.1 | -100.0 | - | -100.0 | - | -97.1 | -100.0 | - |
| Aerospace | - | -100.0 | - | 256.6 | 458.3 | -30.4 | -20.0 | 173.7 | 217.0 | -51.2 |
| Weapons and Nuclear | -100.0 | - | 24093.5 | 4179.1 | -95.6 | -100.0 | - | 178.5 | -100.0 | - |
| **Total** | **-87.0** | **29.5** | **36.6** | **152.5** | **40.6** | **60.7** | **-24.1** | **-18.6** | **50.0** | **-36.3** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 40. B.C. Imports of High Technology Goods from Mainland China, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 |
| Life Sciences | 4.6 | 5.2 | 7.6 | 8.3 | 8.2 | 9.6 | 7.0 | 6.7 | 8.7 | 14.4 | 15.1 |
| Opto-Electronics | 7.6 | 11.9 | 19.3 | 23.2 | 28.0 | 36.3 | 66.3 | 76.8 | 59.9 | 72.2 | 65.7 |
| Computers and Telecommunications | 56.5 | 77.8 | 99.4 | 165.1 | 296.3 | 432.7 | 578.4 | 683.5 | 879.2 | 991.1 | 980.8 |
| Electronics | 2.9 | 4.4 | 1.3 | 1.9 | 3.0 | 3.9 | 8.4 | 11.4 | 13.5 | 11.2 | 11.8 |
| Computer Integrated Manufacturing | 0.8 | 1.0 | 1.3 | 2.1 | 1.7 | 2.6 | 3.7 | 5.6 | 4.9 | 7.4 | 7.7 |
| Material Design | 0.1 | 0.3 | 1.4 | 0.3 | 0.4 | 0.7 | 0.7 | 1.4 | 0.8 | 1.0 | 1.1 |
| Aerospace | 0.3 | 0.5 | 0.6 | 0.5 | 0.8 | 0.8 | 0.9 | 1.2 | 1.2 | 2.2 | 2.9 |
| Weapons and Nuclear | 0.3 | 0.5 | 0.7 | 0.6 | 0.9 | 0.8 | 0.7 | 0.7 | 1.0 | 1.0 | 1.2 |
| **Total** | **73.2** | **101.7** | **131.8** | **202.2** | **339.4** | **487.5** | **666.4** | **787.3** | **969.3** | **1,100.8** | **1,086.6** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 137.5 | 10.4 | 102.4 | -46.1 | -37.3 | 66.8 | -33.0 | 142.1 | 41.2 | -3.4 |
| Life Sciences | 12.8 | 46.1 | 9.4 | -0.7 | 16.4 | -26.6 | -4.9 | 29.5 | 65.7 | 5.5 |
| Opto-Electronics | 55.9 | 62.2 | 20.2 | 20.7 | 29.6 | 82.7 | 15.8 | -22.0 | 20.6 | -8.9 |
| Computers and Telecommunications | 37.6 | 27.8 | 66.1 | 79.4 | 46.0 | 33.7 | 18.2 | 28.6 | 12.7 | -1.0 |
| Electronics | 53.1 | -70.7 | 49.2 | 53.8 | 29.5 | 119.0 | 34.7 | 18.8 | -17.1 | 5.4 |
| Computer Integrated Manufacturing | 19.3 | 34.4 | 57.5 | -16.4 | 48.5 | 44.2 | 49.4 | -12.6 | 52.3 | 3.5 |
| Material Design | 462.6 | 387.2 | -81.5 | 36.4 | 92.9 | 5.2 | 90.1 | -40.3 | 21.9 | 9.1 |
| Aerospace | 66.4 | 12.3 | -24.3 | 62.3 | 10.6 | 4.6 | 34.8 | 2.9 | 85.0 | 29.1 |
| Weapons and Nuclear | 50.8 | 47.3 | -11.9 | 38.6 | -1.6 | -14.4 | -6.6 | 41.7 | 2.0 | 21.7 |
| **Total** | **38.9** | **29.6** | **53.4** | **67.8** | **43.6** | **36.7** | **18.1** | **23.1** | **13.6** | **-1.3** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 41. B.C. Balance of Trade in High Technology Goods with Mainland China, by Commodity Group, 1999-2009

**Balance ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | -4.6 | -5.0 | -7.6 | -8.3 | -8.2 | -9.6 | -7.0 | -6.6 | -8.7 | -14.4 | -15.1 |
| Life Sciences | -7.4 | -11.5 | -17.7 | -22.3 | -25.0 | -33.4 | -60.1 | -70.3 | -56.9 | -64.5 | -62.3 |
| Opto-Electronics | -56.4 | -77.7 | -99.3 | -165.0 | -296.2 | -432.5 | -578.1 | -683.3 | -877.8 | -989.8 | -978.3 |
| Computers and Telecommunications | 14.6 | -1.7 | -0.1 | 0.4 | 8.0 | 6.8 | 5.6 | 0.4 | -3.5 | 2.4 | -4.4 |
| Electronics | -0.7 | 8.3 | 3.5 | 1.1 | 13.5 | 8.1 | 6.6 | 5.7 | 26.1 | 5.1 | -5.3 |
| Computer Integrated Manufacturing | 0.1 | -0.2 | -1.3 | 0.7 | 1.5 | 3.2 | 3.2 | 1.2 | 0.9 | 3.4 | 1.2 |
| Material Design | -0.3 | -0.5 | 1.5 | -0.5 | -0.8 | -0.8 | -0.9 | -0.8 | -1.2 | -2.2 | -2.9 |
| Aerospace | 0.6 | -0.4 | -0.4 | -0.6 | -0.5 | -0.4 | 0.0 | -0.3 | -0.2 | 0.8 | 1.6 |
| Weapons and Nuclear | -0.3 | -0.5 | -0.7 | -0.6 | -0.2 | -0.8 | -0.7 | -0.7 | -0.9 | -1.0 | -1.2 |
| **Total** | **-54.1** | **-88.9** | **-121.6** | **-194.8** | **-307.1** | **-458.5** | **-630.7** | **-754.1** | **-921.5** | **-1,059.5** | **-1,065.8** |

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 42. B.C. Domestic Exports of High Technology Goods to Japan, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 |
| Life Sciences | 1.5 | 2.3 | 0.6 | 0.5 | 0.8 | 1.4 | 1.7 | 2.1 | 0.4 | 0.7 | 1.1 |
| Opto-Electronics | 0.6 | 8.8 | 1.2 | 9.3 | 1.1 | 1.3 | 5.2 | 1.1 | 1.5 | 0.9 | 0.4 |
| Computers and Telecommunications | 1.9 | 16.5 | 6.2 | 2.6 | 3.1 | 4.2 | 5.7 | 11.3 | 8.3 | 9.5 | 8.5 |
| Electronics | 0.2 | 0.4 | 1.4 | 1.0 | 0.1 | 0.2 | 0.2 | 1.0 | 0.0 | 0.8 | 0.0 |
| Computer Integrated Manufacturing | 0.2 | 0.0 | 0.1 | 0.1 | 0.4 | 3.1 | 2.4 | 3.9 | 0.6 | 1.3 | 0.9 |
| Material Design | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aerospace | 0.7 | 0.4 | 0.2 | 8.6 | 1.8 | 0.5 | 0.6 | 0.2 | 5.3 | 10.1 | 0.1 |
| Weapons and Nuclear | 0.1 | 1.9 | 0.0 | 0.0 | 0.0 | 0.2 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| **Total** | **5.2** | **30.4** | **9.7** | **22.0** | **7.3** | **11.1** | **20.0** | **19.7** | **16.1** | **23.3** | **11.1** |

**% change from previous year**

| | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | - | -100.0 | - | - | 326.3 | 52.1 | -97.7 | -100.0 | - | 77.5 |
| Life Sciences | 53.1 | -75.7 | -10.5 | 60.3 | 73.0 | 27.8 | 18.9 | -82.7 | 87.4 | 63.9 |
| Opto-Electronics | 1343.6 | -86.0 | 653.0 | -88.5 | 18.3 | 306.6 | -78.6 | 33.7 | -42.2 | -54.6 |
| Computers and Telecommunications | 784.3 | -62.6 | -58.1 | 21.0 | 34.6 | 36.6 | 97.2 | -26.6 | 13.8 | -10.4 |
| Electronics | 173.8 | 225.9 | -31.2 | -93.3 | 153.6 | -3.3 | 541.7 | -95.5 | 1716.4 | -95.1 |
| Computer Integrated Manufacturing | -99.7 | 9357.1 | 10.6 | 448.0 | 788.7 | -23.8 | 62.1 | -85.3 | 131.5 | -29.5 |
| Material Design | - | - | -100.0 | - | 20.7 | -83.5 | 467.7 | -34.0 | -28.5 | 118.9 |
| Aerospace | -50.0 | -41.1 | 3770.8 | -78.8 | -73.6 | 15.5 | -55.1 | 2047.2 | 89.6 | -99.2 |
| Weapons and Nuclear | 1247.7 | -99.6 | 574.4 | -0.9 | 215.1 | 2422.0 | -99.8 | 0.0 | -100.0 | - |
| **Total** | **483.0** | **-68.0** | **127.1** | **-66.6** | **50.5** | **80.8** | **-1.5** | **-18.1** | **44.3** | **-52.5** |

[r] Revised
[p] Preliminary
Source: BC Stats

## Table 43. B.C. Imports of High Technology Goods from Japan, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 0.3 | 0.6 | 0.2 | 0.4 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 |
| Life Sciences | 11.0 | 11.2 | 16.2 | 14.5 | 14.4 | 17.0 | 21.8 | 23.8 | 21.7 | 25.8 | 24.4 |
| Opto-Electronics | 16.7 | 25.0 | 18.7 | 17.6 | 19.3 | 19.9 | 27.3 | 18.9 | 6.6 | 6.3 | 5.5 |
| Computers and Telecommunications | 196.4 | 177.0 | 145.8 | 160.5 | 156.0 | 166.6 | 172.7 | 143.1 | 173.7 | 181.1 | 131.5 |
| Electronics | 71.0 | 92.4 | 23.9 | 15.1 | 12.5 | 9.9 | 11.6 | 14.6 | 16.1 | 17.2 | 14.7 |
| Computer Integrated Manufacturing | 17.0 | 23.4 | 18.6 | 18.3 | 29.2 | 19.5 | 29.4 | 16.5 | 22.1 | 20.2 | 10.4 |
| Material Design | 7.3 | 6.0 | 5.6 | 1.2 | 0.9 | 0.8 | 0.5 | 0.9 | 0.8 | 0.8 | 0.9 |
| Aerospace | 16.8 | 22.7 | 16.3 | 12.8 | 9.4 | 14.0 | 18.1 | 16.0 | 20.7 | 18.4 | 15.9 |
| Weapons and Nuclear | 0.5 | 0.8 | 1.1 | 1.0 | 0.9 | 1.0 | 0.5 | 0.5 | 0.5 | 0.4 | 0.5 |
| **Total** | **336.8** | **359.1** | **246.5** | **241.3** | **242.7** | **248.7** | **282.0** | **234.4** | **262.3** | **270.5** | **204.0** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 136.9 | -61.0 | 53.6 | -17.5 | -66.6 | -46.3 | 19.0 | 44.7 | 48.2 | 32.6 |
| Life Sciences | 1.7 | 45.0 | -10.8 | -0.8 | 18.0 | 28.2 | 9.5 | -8.8 | 18.8 | -5.4 |
| Opto-Electronics | 49.9 | -25.2 | -5.9 | 9.6 | 3.0 | 37.5 | -30.6 | -65.3 | -3.4 | -13.5 |
| Computers and Telecommunications | -9.9 | -17.6 | 10.0 | -2.8 | 6.8 | 3.7 | -17.2 | 21.4 | 4.2 | -27.4 |
| Electronics | 30.1 | -74.2 | -36.5 | -17.8 | -20.9 | 17.9 | 26.0 | 10.0 | 7.0 | -14.6 |
| Computer Integrated Manufacturing | 38.1 | -20.4 | -2.0 | 59.6 | -33.0 | 50.3 | -44.0 | 34.3 | -8.6 | -48.7 |
| Material Design | -17.2 | -6.8 | -79.4 | -23.9 | -14.3 | -35.4 | 87.4 | -10.9 | -1.5 | 10.0 |
| Aerospace | 34.7 | -28.0 | -21.4 | -27.0 | 50.0 | 29.1 | -11.9 | 29.4 | -11.0 | -13.4 |
| Weapons and Nuclear | 66.7 | 43.5 | -12.9 | -3.5 | 8.9 | -48.5 | -5.8 | 5.6 | -16.7 | 9.3 |
| **Total** | **6.6** | **-31.3** | **-2.1** | **0.6** | **2.5** | **13.4** | **-16.9** | **11.9** | **3.1** | **-24.6** |

[r] Revised
[p] Preliminary
Source: BC Stats

## Table 44. B.C. Balance of Trade in High Technology Goods with Japan, by Commodity Group, 1999-2009

| | Balance ($000,000) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | -11.0 | -11.1 | -16.2 | -14.5 | -14.3 | -16.7 | -21.4 | -23.8 | -21.7 | -25.8 | -24.4 |
| Life Sciences | -15.1 | -22.6 | -18.1 | -16.9 | -18.0 | -18.4 | -25.3 | -16.4 | -5.7 | -4.9 | -3.7 |
| Opto-Electronics | -195.8 | -168.1 | -144.6 | -151.1 | -154.9 | -165.3 | -167.5 | -142.0 | -172.2 | -180.2 | -131.1 |
| Computers and Telecommunications | -69.0 | -75.8 | -16.9 | -12.1 | -8.7 | -5.0 | -5.1 | -3.0 | -5.5 | -7.3 | -5.8 |
| Electronics | -5.4 | 17.9 | -2.6 | -3.2 | -8.3 | 2.4 | -0.5 | 7.1 | -5.0 | -15.2 | -9.4 |
| Computer Integrated Manufacturing | -7.1 | -6.0 | -5.5 | -1.1 | -0.5 | 2.4 | 2.0 | 3.2 | -0.2 | 0.6 | 0.1 |
| Material Design | -16.8 | -22.7 | -16.3 | -12.8 | -9.3 | -14.0 | -18.1 | -16.0 | -20.7 | -18.4 | -15.9 |
| Aerospace | 0.6 | -0.1 | -0.6 | 7.6 | 1.0 | -0.4 | 0.4 | 0.3 | 5.1 | 9.9 | 0.2 |
| Weapons and Nuclear | -0.3 | 1.2 | -1.1 | -0.9 | -0.8 | -0.8 | 3.3 | -0.5 | -0.5 | -0.4 | -0.4 |
| **Total** | **-319.7** | **-287.2** | **-221.2** | **-204.4** | **-213.4** | **-214.9** | **-231.8** | **-190.6** | **-226.0** | **-241.5** | **-190.2** |

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 45. B.C. Domestic Exports of High Technology Goods to the European Union, by Commodity Group, 1999-2009

| | Value ($000,000) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 | 1.0 | 1.4 | 0.8 | 1.1 | 1.4 | 1.7 |
| Life Sciences | 4.8 | 4.3 | 4.0 | 11.8 | 17.3 | 26.9 | 19.7 | 32.7 | 28.9 | 25.2 | 28.0 |
| Opto-Electronics | 8.7 | 17.3 | 24.4 | 3.4 | 3.0 | 3.2 | 3.6 | 5.4 | 18.1 | 85.6 | 22.4 |
| Computers and Telecommunications | 34.3 | 20.1 | 27.8 | 20.8 | 20.1 | 19.1 | 24.3 | 48.5 | 61.8 | 57.9 | 50.1 |
| Electronics | 0.7 | 0.8 | 1.1 | 0.4 | 0.2 | 2.0 | 0.3 | 0.6 | 0.6 | 0.6 | 0.6 |
| Computer Integrated Manufacturing | 1.1 | 1.4 | 0.9 | 1.1 | 2.3 | 8.6 | 10.5 | 11.0 | 8.5 | 12.1 | 12.0 |
| Material Design | 0.1 | 0.2 | 6.8 | 0.0 | 0.2 | 0.1 | 0.2 | 0.9 | 0.5 | 0.5 | 0.2 |
| Aerospace | 3.6 | 13.6 | 22.5 | 19.9 | 7.8 | 4.6 | 10.3 | 6.6 | 7.2 | 9.3 | 11.8 |
| Weapons and Nuclear | 1.0 | 2.5 | 0.3 | 0.8 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| **Total** | **54.2** | **60.3** | **87.8** | **58.3** | **51.5** | **65.7** | **70.3** | **106.6** | **126.7** | **192.6** | **126.9** |

| | % change from previous year | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2003 | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
| Biotechnology | -100.0 | - | 606.6 | 219.6 | 264.1 | 42.7 | -41.1 | 32.7 | 28.4 | 20.4 |
| Life Sciences | -11.1 | -5.7 | 194.2 | 46.9 | 55.5 | -27.0 | 66.4 | -11.6 | -13.0 | 11.2 |
| Opto-Electronics | 99.1 | 41.2 | -86.2 | -11.4 | 8.3 | 11.6 | 49.6 | 236.3 | 372.7 | -73.8 |
| Computers and Telecommunications | -41.4 | 38.2 | -24.9 | -3.7 | -4.9 | 27.3 | 99.6 | 27.4 | -6.3 | -13.5 |
| Electronics | 12.4 | 39.7 | -63.6 | -40.8 | 782.5 | -87.8 | 154.8 | -7.7 | 0.9 | 7.2 |
| Computer Integrated Manufacturing | 33.4 | -39.2 | 21.9 | 118.0 | 270.2 | 23.2 | 4.3 | -22.8 | 42.3 | -0.3 |
| Material Design | 216.0 | 2663.1 | -99.7 | 944.6 | -66.8 | 184.4 | 429.6 | -48.7 | 1.8 | -60.7 |
| Aerospace | 278.5 | 65.0 | -11.6 | -60.7 | -41.0 | 123.7 | -36.4 | 10.2 | 28.2 | 26.9 |
| Weapons and Nuclear | 164.2 | -86.4 | 136.8 | -63.4 | -34.0 | -93.2 | -66.0 | 645.1 | 159.8 | -4.2 |
| **Total** | **11.1** | **45.7** | **-33.7** | **-11.6** | **27.6** | **6.9** | **51.7** | **18.9** | **52.0** | **-34.1** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 46. B.C. Imports of High Technology Goods from the European Union, by Commodity Group, 1999-2009

**Value ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 8.4 | 11.0 | 28.3 | 22.5 | 19.3 | 14.4 | 14.1 | 19.6 | 30.9 | 52.1 | 55.3 |
| Life Sciences | 92.9 | 110.7 | 132.4 | 138.1 | 143.3 | 127.9 | 139.4 | 151.6 | 144.8 | 130.2 | 165.7 |
| Opto-Electronics | 3.6 | 7.2 | 5.8 | 7.7 | 9.3 | 8.8 | 13.1 | 9.0 | 10.1 | 15.2 | 7.0 |
| Computers and Telecommunications | 116.7 | 169.1 | 90.2 | 99.9 | 96.0 | 103.1 | 84.7 | 87.9 | 95.8 | 106.4 | 95.5 |
| Electronics | 59.8 | 55.9 | 14.4 | 11.8 | 13.8 | 10.9 | 14.4 | 14.2 | 14.7 | 14.6 | 12.8 |
| Computer Integrated Manufacturing | 13.6 | 19.9 | 25.1 | 27.0 | 23.7 | 25.9 | 25.8 | 27.4 | 24.3 | 21.7 | 18.3 |
| Material Design | 4.4 | 9.8 | 11.1 | 2.1 | 2.5 | 2.6 | 1.9 | 2.0 | 2.8 | 2.5 | 1.6 |
| Aerospace | 349.8 | 232.4 | 546.6 | 447.6 | 182.5 | 113.5 | 78.9 | 82.2 | 80.0 | 95.8 | 103.4 |
| Weapons and Nuclear | 5.5 | 10.4 | 11.5 | 6.5 | 5.4 | 9.7 | 3.2 | 4.7 | 3.5 | 4.6 | 5.4 |
| **Total** | **654.7** | **626.4** | **865.5** | **763.2** | **495.9** | **416.8** | **375.4** | **398.7** | **406.9** | **493.0** | **465.0** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 30.0 | 158.1 | -20.5 | -14.2 | -25.3 | -2.3 | 39.5 | 57.4 | 68.8 | 6.0 |
| Life Sciences | 19.1 | 19.7 | 4.3 | 3.7 | -10.7 | 9.0 | 8.7 | -4.4 | 24.4 | -8.0 |
| Opto-Electronics | 102.1 | -19.2 | 32.2 | 21.2 | -6.1 | 49.1 | -31.2 | 12.0 | 50.2 | -53.6 |
| Computers and Telecommunications | 45.0 | -46.7 | 10.7 | -3.9 | 7.3 | -17.8 | 3.7 | 9.1 | 11.0 | -10.2 |
| Electronics | -6.6 | -74.2 | -17.9 | 16.3 | -21.0 | 31.8 | -1.0 | 3.2 | -0.3 | -12.7 |
| Computer Integrated Manufacturing | 46.7 | 26.3 | 7.3 | -12.0 | 9.1 | -0.5 | 6.3 | -11.4 | -10.8 | -15.7 |
| Material Design | 123.4 | 13.0 | -80.8 | 17.2 | 5.1 | -29.2 | 10.2 | 35.3 | -10.6 | -35.1 |
| Aerospace | -33.6 | 135.2 | -18.1 | -59.2 | -37.8 | -30.5 | 4.2 | -2.7 | 19.6 | 8.0 |
| Weapons and Nuclear | 88.5 | 10.7 | -43.6 | -16.2 | 77.6 | -66.6 | 46.6 | -26.0 | 32.0 | 17.0 |
| **Total** | **-4.3** | **38.2** | **-11.8** | **-35.0** | **-16.0** | **-9.9** | **6.2** | **2.1** | **21.2** | **-5.7** |

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 47. B.C. Balance of Trade in High Technology Goods with the European Union, by Commodity Group, 1999-2009

**Balance ($000,000)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | -8.4 | -11.0 | -28.3 | -22.4 | -19.0 | -13.4 | -12.7 | -18.8 | -29.8 | -50.7 | -53.5 |
| Life Sciences | -88.0 | -106.3 | -128.4 | -126.1 | -125.9 | -100.8 | -117.4 | -118.4 | -115.1 | -153.7 | -137.1 |
| Opto-Electronics | 5.1 | 10.3 | 18.9 | -4.3 | -6.0 | -5.3 | -9.3 | -3.1 | 8.1 | 70.9 | 18.1 |
| Computers and Telecommunications | -78.9 | -141.3 | -58.3 | -75.5 | -70.5 | -78.6 | -49.8 | -32.2 | -24.2 | -35.7 | -40.1 |
| Electronics | -46.7 | -20.9 | 5.2 | -4.3 | 8.2 | 22.2 | 22.3 | 40.3 | 2.0 | -8.0 | -11.9 |
| Computer Integrated Manufacturing | -12.5 | -18.4 | -24.2 | -25.9 | -21.3 | -17.1 | -14.1 | -12.0 | -15.3 | -9.4 | -5.1 |
| Material Design | -4.3 | -9.6 | -4.3 | -2.1 | -2.2 | -2.5 | -1.1 | -0.9 | -1.6 | -1.9 | -1.4 |
| Aerospace | -343.9 | -210.0 | -516.6 | -415.4 | -167.5 | -102.2 | -56.3 | -53.1 | -60.7 | -77.5 | -71.9 |
| Weapons and Nuclear | -4.3 | -7.6 | -11.1 | -5.6 | -4.7 | -9.4 | -2.7 | -4.2 | -2.9 | -3.9 | -4.9 |
| **Total** | **-581.9** | **-514.7** | **-747.0** | **-681.6** | **-409.0** | **-307.0** | **-240.9** | **-202.4** | **-239.5** | **-269.8** | **-307.9** |

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within Canada only (in the case of tables in this report, within B.C. only).

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 48. Exports of High Technology Services, 1999-2009

**BRITISH COLUMBIA**
**Value ($ millions)**

| | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Software Publishers | 318 | 280 | 549 | 474 | 548 | 781 | 888 | 973 | 1,040 | 1,049 | 1,040 |
| Other Computer and Related Services | 368 | 627 | 408 | 348 | 445 | 415 | 493 | 653 | 777 | 799 | 769 |
| Motion Picture Production & Post-Production | 213 | 175 | 161 | 233 | 346 | 219 | 377 | 358 | 207 | 318 | 413 |
| Telecommunications and Related | 199 | 169 | 152 | 178 | 182 | 165 | 122 | 97 | 96 | 91 | 98 |
| Engineering Services | 169 | 103 | 137 | 112 | 216 | 211 | 212 | 548 | 669 | 656 | 598 |
| Other Services | 57 | 73 | 90 | 228 | 201 | 265 | 288 | 280 | 316 | 335 | 313 |
| **Total** | **1,324** | **1,426** | **1,497** | **1,573** | **1,938** | **2,056** | **2,380** | **2,908** | **3,105** | **3,247** | **3,230** |

**% change from previous year**

| | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Software Publishers | -12.1 | 96.2 | -13.6 | 15.6 | 42.5 | 13.7 | 9.5 | 6.9 | 0.9 | -0.9 |
| Other Computer and Related Services | 70.2 | -35.0 | -14.6 | 27.9 | -6.8 | 18.7 | 32.4 | 19.1 | 2.8 | -3.7 |
| Motion Picture Production & Post-Production | -17.7 | -8.0 | 44.6 | 48.5 | -36.6 | 72.2 | -5.2 | -42.3 | 53.9 | 30.0 |
| Telecommunications and Related | -15.3 | -9.6 | 16.6 | 2.2 | -9.4 | -26.0 | -20.1 | -1.7 | -5.0 | 7.4 |
| Engineering Services | -39.0 | 33.0 | -18.2 | 93.6 | -2.4 | 0.4 | 158.1 | 22.2 | -2.1 | -8.8 |
| Other Services | 27.8 | 23.4 | 152.8 | -12.1 | 31.8 | 8.9 | -2.8 | 12.9 | 5.8 | -6.6 |
| **Total** | **7.7** | **5.0** | **5.1** | **23.2** | **6.1** | **15.8** | **22.2** | **6.8** | **4.6** | **-0.5** |

**CANADA**
**Value ($ millions)**

| | 1999[r] | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Software Publishers | 2,425 | 2,365 | 2,573 | 2,377 | 2,640 | 2,671 | 2,667 | 2,969 | 3,224 | 3,035 | 2,853 |
| Other Computer and Related Services | 2,303 | 3,104 | 3,028 | 2,697 | 2,089 | 2,249 | 2,697 | 4,178 | 5,454 | 5,697 | 5,357 |
| Motion Picture Production & Post-Production | 900 | 1,009 | 1,084 | 935 | 778 | 1,212 | 1,066 | 1,019 | 941 | 849 | 877 |
| Telecommunications and Related | 1,398 | 1,219 | 1,444 | 1,473 | 1,463 | 1,490 | 1,373 | 1,390 | 1,444 | 1,596 | 1,637 |
| Engineering Services | 1,104 | 950 | 1,076 | 1,304 | 1,458 | 1,822 | 2,055 | 2,615 | 3,433 | 3,298 | 3,177 |
| Other Services | 347 | 414 | 578 | 1,363 | 1,236 | 1,297 | 1,285 | 1,330 | 1,282 | 1,404 | 1,291 |
| **Total** | **8,477** | **9,062** | **9,783** | **10,150** | **9,663** | **10,740** | **11,143** | **13,500** | **15,777** | **15,878** | **15,193** |

**% change from previous year**

| | 2000[r] | 2001[r] | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Software Publishers | -2.5 | 8.8 | -7.6 | 11.0 | 1.2 | -0.2 | 11.3 | 8.6 | -5.9 | -6.0 |
| Other Computer and Related Services | 34.8 | -2.5 | -10.9 | -22.6 | 7.7 | 20.0 | 54.9 | 30.6 | 4.4 | -6.0 |
| Motion Picture Production & Post-Production | 12.1 | 7.4 | -13.7 | -16.8 | 55.6 | -12.0 | -4.4 | -7.7 | -9.8 | 3.3 |
| Telecommunications and Related | -12.8 | 18.5 | 2.0 | -0.7 | 1.8 | -7.9 | 1.2 | 3.9 | 10.5 | 2.6 |
| Engineering Services | -14.0 | 13.2 | 21.2 | 11.8 | 25.0 | 12.8 | 27.2 | 31.3 | -3.9 | -3.7 |
| Other Services | 19.3 | 39.5 | 136.0 | -9.4 | 5.0 | -0.9 | 3.5 | -3.6 | 9.4 | -8.0 |
| **Total** | **6.9** | **8.0** | **3.8** | **-4.8** | **11.1** | **3.8** | **21.2** | **16.9** | **0.6** | **-4.3** |

[r] Revised
[p] Preliminary

Source: BC Stats and Statistics Canada

## Table 49. Domestic Exports of High Technology Goods by Province, 1999-2009

**Value ($ millions)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| British Columbia | 840.1 | 923.1 | 748.1 | 684.6 | 635.2 | 686.6 | 705.1 | 856.5 | 868.8 | 988.4 | 865.2 |
| Alberta | 1,915.6 | 4,375.7 | 2,439.0 | 1,889.6 | 1,181.6 | 1,131.6 | 1,023.6 | 1,224.2 | 999.5 | 867.2 | 644.5 |
| Manitoba | 712.0 | 573.3 | 619.3 | 464.8 | 472.7 | 381.8 | 435.5 | 487.5 | 571.0 | 550.8 | 668.9 |
| Ontario | 12,338.3 | 15,186.1 | 13,512.8 | 10,287.7 | 8,438.4 | 9,386.0 | 10,917.6 | 11,461.0 | 11,330.9 | 11,521.9 | 10,853.4 |
| Quebec | 13,835.2 | 20,677.2 | 16,948.2 | 14,498.2 | 14,269.5 | 13,217.6 | 13,605.7 | 12,462.0 | 13,014.3 | 13,218.2 | 12,028.3 |
| **Canada** | **29,854.5** | **42,221.3** | **34,594.9** | **28,019.4** | **25,171.7** | **24,969.2** | **26,882.7** | **26,783.2** | **27,101.3** | **27,516.5** | **25,456.1** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| British Columbia | 9.9 | -19.0 | -8.5 | -7.2 | 8.1 | 2.7 | 21.5 | 1.4 | 13.8 | -12.5 |
| Alberta | 128.4 | -44.3 | -22.5 | -37.5 | -4.2 | -9.5 | 19.6 | -18.4 | -13.2 | -25.7 |
| Manitoba | -19.5 | 8.0 | -25.0 | 1.7 | -19.2 | 14.1 | 11.9 | 17.1 | -3.5 | 21.4 |
| Ontario | 23.1 | -11.0 | -23.9 | -18.0 | 11.2 | 16.3 | 5.0 | -1.1 | 1.7 | -5.8 |
| Quebec | 49.5 | -18.0 | -14.5 | -1.6 | -7.4 | 2.9 | -8.4 | 4.4 | 1.6 | -9.0 |
| **Canada** | **41.4** | **-18.1** | **-19.0** | **-10.2** | **-0.8** | **7.7** | **-0.4** | **1.2** | **1.5** | **-7.5** |

**High Technology Share of Total Domestic Exports (%)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| British Columbia | 2.9 | 2.7 | 2.4 | 2.4 | 2.2 | 2.2 | 2.1 | 2.6 | 2.8 | 3.0 | 3.4 |
| Alberta | 5.5 | 7.9 | 4.3 | 3.9 | 2.1 | 1.8 | 1.3 | 1.6 | 1.2 | 0.8 | 0.9 |
| Manitoba | 8.9 | 6.0 | 6.5 | 4.9 | 5.1 | 4.1 | 4.7 | 4.8 | 4.7 | 4.2 | 6.3 |
| Ontario | 7.0 | 8.2 | 7.6 | 5.7 | 5.0 | 5.2 | 6.1 | 6.5 | 6.4 | 7.0 | 8.6 |
| Quebec | 23.2 | 29.0 | 24.9 | 22.1 | 23.4 | 20.5 | 20.3 | 18.0 | 19.4 | 19.1 | 21.3 |
| **Canada** | **9.0** | **10.9** | **9.2** | **7.7** | **7.1** | **6.5** | **6.6** | **6.5** | **6.5** | **6.0** | **7.6** |

Note that high technology exports for Canada, Alberta, Ontario and Quebec are based on high tech definitions developed for British Columbia. If these definitions were derived specifically for any of those regions, they might differ slightly.

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 50. Imports of High Technology Goods, Canada and B.C., 1999-2009

**Value ($ millions)**

| | 1999 | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| British Columbia | 4,396.6 | 4,702.9 | 4,281.3 | 4,048.1 | 3,752.3 | 3,766.4 | 4,193.5 | 4,079.4 | 4,651.8 | 4,888.9 | 4,357.2 |
| **Canada** | **47,970.8** | **57,135.2** | **49,910.3** | **43,933.6** | **40,504.6** | **43,671.9** | **45,918.0** | **46,700.8** | **50,430.3** | **52,971.5** | **48,161.1** |

**% change from previous year**

| | 2000 | 2001 | 2002[r] | 2003[r] | 2004[r] | 2005[r] | 2006[r] | 2007[r] | 2008 | 2009[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| British Columbia | 7.0 | -9.0 | -5.4 | -7.3 | 0.4 | 11.3 | -2.7 | 14.0 | 5.1 | -10.9 |
| **Canada** | **19.1** | **-12.6** | **-12.0** | **-7.8** | **7.8** | **5.1** | **1.7** | **8.0** | **5.0** | **-9.1** |

Note that high technology imports for Canada are based on high tech definitions developed for British Columbia. If these definitions were derived specifically for Canada or another region, they might differ slightly.

[r] Revised
[p] Preliminary

Source: BC Stats

## Table 51. United States High Technology Commodity Trade, 1999-2009

**Value ($US millions)**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Domestic Exports | 178,519.9 | 197,109.5 | 172,412.2 | 153,273.5 | 151,535.4 | 166,441.8 | 177,599.6 | 209,052.1 | 226,818.8 | 223,455.2 | 192,902.4 |
| Re-Exports | 21,488.0 | 30,051.5 | 27,694.6 | 25,353.8 | 28,251.2 | 35,012.2 | 38,006.1 | 43,517.1 | 46,624.7 | 52,362.4 | 51,826.1 |
| Imports | 180,646.3 | 222,146.4 | 195,265.2 | 196,100.1 | 207,195.8 | 238,478.3 | 259,968.7 | 290,848.0 | 326,928.8 | 331,372.0 | 300,681.0 |
| **Balance of Trade** | **19,361.5** | **5,014.6** | **4,841.5** | **-17,472.8** | **-27,409.3** | **-37,024.2** | **-44,363.0** | **-38,278.8** | **-53,485.2** | **-55,554.4** | **-55,952.5** |

**% change from previous year**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Domestic Exports | 10.4 | -12.5 | -11.1 | -1.1 | 9.8 | 6.7 | 17.7 | 8.5 | -1.5 | -13.7 |
| Re-Exports | 39.9 | -7.8 | -8.5 | 11.4 | 23.9 | 8.6 | 14.5 | 7.1 | 12.3 | -1.0 |
| Imports | 23.0 | -12.1 | 0.4 | 5.7 | 15.1 | 9.0 | 11.9 | 12.4 | 1.4 | -9.3 |
| **Balance of Trade** | **-74.1** | **-3.5** | **-460.9** | **56.9** | **35.1** | **19.8** | **-13.7** | **39.7** | **3.9** | **0.7** |

Source: U.S. Department of Commerce

## Table 52. High Technology Trade Comparison: United States vs. Canada and B.C. (in Canadian $), 1999-2009

Value ($Cdn millions)

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Domestic Exports** | | | | | | | | | | | |
| United States* | 265,227.9 | 292,785.2 | 267,038.9 | 240,691.9 | 212,303.3 | 216,587.8 | 215,145.1 | 237,137.2 | 243,613.8 | 238,446.1 | 220,204.9 |
| British Columbia | 840.1 | 923.1 | 748.1 | 684.6 | 635.2 | 686.6 | 705.1 | 856.5 | 868.8 | 988.4 | 865.2 |
| Canada | 29,854.5 | 42,221.3 | 34,594.9 | 28,019.4 | 25,171.7 | 24,969.2 | 26,882.7 | 26,783.2 | 27,101.3 | 27,516.5 | 25,456.1 |
| **Imports** | | | | | | | | | | | |
| United States* | 268,387.2 | 329,975.0 | 302,434.6 | 307,944.4 | 290,284.5 | 310,327.5 | 314,927.4 | 329,922.0 | 351,136.5 | 353,602.7 | 343,237.9 |
| British Columbia | 4,396.6 | 4,702.9 | 4,281.3 | 4,048.1 | 3,752.3 | 3,766.4 | 4,193.5 | 4,079.4 | 4,651.8 | 4,888.9 | 4,357.2 |
| Canada | 47,970.8 | 57,135.2 | 49,910.3 | 43,933.6 | 40,504.6 | 43,671.9 | 45,918.0 | 46,700.8 | 50,430.3 | 52,971.5 | 48,161.1 |

% change from previous year

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Domestic Exports** | | | | | | | | | | |
| United States* | 10.4 | -8.8 | -9.9 | -11.8 | 2.0 | -0.7 | 10.2 | 2.7 | -2.1 | -7.7 |
| British Columbia | 9.9 | -19.0 | -8.5 | -7.2 | 8.1 | 2.7 | 21.5 | 1.4 | 13.8 | -12.5 |
| Canada | 41.4 | -18.1 | -19.0 | -10.2 | -0.8 | 7.7 | -0.4 | 1.2 | 1.5 | -7.5 |
| **Imports** | | | | | | | | | | |
| United States* | 22.9 | -8.3 | 1.8 | -5.7 | 6.9 | 1.5 | 4.8 | 6.4 | 0.7 | -2.9 |
| British Columbia | 7.0 | -9.0 | -5.4 | -7.3 | 0.4 | 11.3 | -2.7 | 14.0 | 5.1 | -10.9 |
| Canada | 19.1 | -12.6 | -12.0 | -7.8 | 7.8 | 5.1 | 1.7 | 8.0 | 5.0 | -9.1 |

* Converted from U.S. dollars using an average annual exchange rate

Source: BC Stats and U.S. Department of Commerce

## Table 53. United States Domestic Exports of High Technology Goods, by Commodity Group, 1999-2009

Value ($US millions)

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 1,578.5 | 1,715.5 | 1,594.7 | 2,115.5 | 2,844.2 | 3,714.2 | 4,553.5 | 5,120.2 | 7,467.2 | 9,364.6 | 12,149.8 |
| Life Sciences | 10,491.6 | 11,413.6 | 12,124.0 | 11,116.2 | 12,026.6 | 13,218.3 | 15,042.4 | 17,121.3 | 19,547.5 | 22,353.0 | 22,468.1 |
| Opto-Electronics | 1,988.0 | 3,814.6 | 3,091.7 | 2,179.7 | 2,121.9 | 3,055.2 | 3,838.2 | 4,303.3 | 4,768.3 | 4,175.9 | 3,403.8 |
| Computers and Telecommunications | 56,235.3 | 64,197.0 | 53,439.9 | 42,336.4 | 39,407.5 | 42,150.2 | 44,076.6 | 46,606.7 | 49,161.2 | 48,042.8 | 37,502.3 |
| Electronics | 37,581.7 | 45,927.8 | 34,035.5 | 32,449.7 | 36,371.9 | 35,944.7 | 34,912.0 | 38,648.8 | 36,279.0 | 36,491.9 | 25,026.8 |
| Computer Integrated Manufacturing | 8,423.9 | 13,754.5 | 8,787.2 | 7,997.3 | 7,651.5 | 12,302.4 | 11,092.3 | 13,810.3 | 13,623.6 | 10,293.8 | 7,314.0 |
| Material Design | 1,581.8 | 2,574.7 | 2,190.6 | 1,032.7 | 981.8 | 1,055.5 | 1,056.9 | 1,274.8 | 1,531.5 | 1,703.9 | 1,479.1 |
| Aerospace | 50,012.5 | 51,030.3 | 54,298.0 | 50,937.6 | 47,333.9 | 51,862.5 | 60,528.1 | 78,597.9 | 90,011.6 | 86,973.4 | 78,940.9 |
| Weapons and Nuclear | 2,626.6 | 2,681.4 | 2,850.6 | 3,108.4 | 2,796.1 | 3,138.8 | 2,499.8 | 3,568.9 | 4,428.8 | 4,055.8 | 4,617.5 |
| **Total** | **178,519.9** | **197,109.5** | **172,412.2** | **153,273.5** | **151,535.4** | **166,441.8** | **177,599.6** | **209,052.1** | **226,818.8** | **223,455.2** | **192,902.4** |

% change from previous year

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 8.7 | -7.0 | 32.7 | 34.4 | 30.6 | 22.6 | 12.4 | 45.8 | 25.4 | 29.7 |
| Life Sciences | 8.8 | 6.2 | -8.3 | 8.2 | 9.9 | 13.8 | 13.8 | 14.2 | 14.4 | 0.5 |
| Opto-Electronics | 91.9 | -19.0 | -29.5 | -2.7 | 44.0 | 25.6 | 12.1 | 10.8 | -12.4 | -18.5 |
| Computers and Telecommunications | 14.2 | -16.8 | -20.8 | -6.9 | 7.0 | 4.6 | 5.7 | 5.5 | -2.3 | -21.9 |
| Electronics | 22.2 | -25.9 | -4.7 | 12.1 | -1.2 | -2.9 | 10.7 | -6.1 | 0.6 | -31.4 |
| Computer Integrated Manufacturing | 63.3 | -36.1 | -9.0 | -4.3 | 60.8 | -9.8 | 24.5 | -1.4 | -24.4 | -28.9 |
| Material Design | 62.8 | -14.9 | -52.9 | -4.9 | 7.5 | 0.1 | 20.6 | 20.1 | 11.3 | -13.2 |
| Aerospace | -12.0 | 6.4 | -6.2 | -7.1 | 9.6 | 16.7 | 29.9 | 14.5 | -3.4 | -9.2 |
| Weapons and Nuclear | 2.1 | 6.3 | 9.0 | -10.0 | 12.3 | -20.4 | 42.8 | 24.1 | -8.4 | 13.8 |
| **Total** | **10.4** | **-12.5** | **-11.1** | **-1.1** | **9.8** | **6.7** | **17.7** | **8.5** | **-1.5** | **-13.7** |

Source: U.S. Department of Commerce

## Table 54. United States Imports of High Technology Goods, by Commodity Group, 1999-2009

**Value ($US millions)**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 1,006.4 | 1,136.0 | 1,294.4 | 1,871.9 | 2,183.9 | 1,967.4 | 4,218.8 | 4,872.6 | 6,441.6 | 5,758.3 | 5,635.0 |
| Life Sciences | 15,085.1 | 16,210.5 | 20,113.0 | 25,950.3 | 30,936.9 | 32,799.0 | 30,390.3 | 33,736.6 | 36,236.0 | 39,934.4 | 38,083.0 |
| Opto-Electronics | 4,672.2 | 5,822.9 | 5,607.5 | 5,436.6 | 5,254.9 | 7,795.0 | 12,173.5 | 19,575.0 | 24,973.7 | 25,568.6 | 23,290.9 |
| Computers and Telecommunications | 89,327.0 | 111,180.2 | 95,158.6 | 100,765.9 | 110,088.5 | 132,539.0 | 147,188.5 | 160,836.8 | 179,710.6 | 181,801.8 | 169,862.5 |
| Electronics | 37,978.3 | 48,822.2 | 30,882.6 | 26,649.5 | 25,135.2 | 27,454.0 | 26,594.4 | 28,009.1 | 27,033.2 | 25,644.7 | 20,900.1 |
| Computer Integrated Manufacturing | 6,220.3 | 8,684.9 | 7,473.4 | 6,562.2 | 6,262.8 | 7,587.2 | 8,897.2 | 10,289.6 | 10,766.1 | 10,084.2 | 6,689.1 |
| Material Design | 1,618.8 | 2,707.4 | 2,435.9 | 1,484.9 | 1,510.5 | 1,794.4 | 1,803.8 | 2,170.8 | 2,383.7 | 2,254.5 | 1,505.2 |
| Aerospace | 23,256.9 | 25,733.1 | 30,511.0 | 25,212.9 | 22,773.1 | 23,832.8 | 25,531.4 | 27,584.3 | 33,851.3 | 35,022.4 | 29,646.3 |
| Weapons and Nuclear | 1,481.3 | 1,849.3 | 1,788.8 | 2,165.9 | 3,050.4 | 2,709.5 | 3,170.8 | 3,773.1 | 5,532.6 | 5,303.0 | 5,068.9 |
| **Total** | **180,646.3** | **222,146.4** | **195,265.2** | **196,100.1** | **207,196.2** | **238,478.3** | **259,968.7** | **290,848.0** | **326,928.8** | **331,372.0** | **300,681.0** |

**% change from previous year**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 12.9 | 13.9 | 44.6 | 16.7 | -9.9 | 114.4 | 15.5 | 32.2 | -10.6 | -2.1 |
| Life Sciences | 7.5 | 24.1 | 29.0 | 19.2 | 6.0 | -7.3 | 11.0 | 7.4 | 10.2 | -4.6 |
| Opto-Electronics | 24.6 | -3.7 | -3.0 | -3.3 | 48.3 | 56.2 | 60.8 | 27.6 | 2.4 | -8.9 |
| Computers and Telecommunications | 24.5 | -14.4 | 5.9 | 9.3 | 20.4 | 11.1 | 9.3 | 11.7 | 1.2 | -6.6 |
| Electronics | 28.6 | -36.7 | -13.7 | -5.7 | 9.2 | -3.1 | 5.3 | -3.5 | -5.1 | -18.5 |
| Computer Integrated Manufacturing | 39.6 | -13.9 | -12.2 | -4.6 | 21.1 | 17.3 | 15.6 | 4.6 | -6.3 | -33.7 |
| Material Design | 67.2 | -10.0 | -39.0 | 1.7 | 18.8 | 0.5 | 20.3 | 9.8 | -5.4 | -33.2 |
| Aerospace | 10.6 | 18.6 | -17.4 | -9.7 | 4.7 | 7.1 | 8.0 | 22.7 | 3.5 | -15.4 |
| Weapons and Nuclear | 24.8 | -3.3 | 21.1 | 40.8 | -11.2 | 17.0 | 19.0 | 46.6 | -4.1 | -4.4 |
| **Total** | **23.0** | **-12.1** | **0.4** | **5.7** | **15.1** | **9.0** | **11.9** | **12.4** | **1.4** | **-9.3** |

Source: U.S. Department of Commerce

## Table 55. United States Balance of Trade in High Technology Goods, by Commodity Group, 1999-2009

**Balance ($US millions)**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotechnology | 587.8 | 592.8 | 320.6 | 258.6 | 678.9 | 1,775.8 | 373.7 | 290.5 | 1,101.9 | 3,672.8 | 6,645.5 |
| Life Sciences | -4,067.4 | -4,259.9 | -7,273.4 | -14,091.7 | -17,934.8 | -18,283.1 | -13,896.4 | -14,980.5 | -14,652.8 | -14,757.6 | -12,815.8 |
| Opto-Electronics | -2,478.3 | -1,710.0 | -2,204.8 | -3,006.1 | -2,787.9 | -4,288.6 | -7,536.7 | -14,511.4 | -19,506.4 | -20,533.2 | -18,799.1 |
| Computers and Telecommunications | -24,843.0 | -34,929.8 | -29,898.2 | -47,456.6 | -56,960.7 | -73,328.9 | -83,180.2 | -91,595.9 | -104,913.2 | -104,252.8 | -103,184.5 |
| Electronics | 9,580.7 | 11,807.6 | 14,475.8 | 16,113.4 | 21,462.0 | 21,110.4 | 20,949.4 | 25,406.2 | 23,510.0 | 25,154.4 | 16,366.4 |
| Computer Integrated Manufacturing | 2,643.8 | 5,610.2 | 1,978.0 | 2,000.3 | 2,056.9 | 5,457.1 | 2,956.9 | 4,375.2 | 3,886.4 | 1,450.1 | 1,670.4 |
| Material Design | 5.2 | -56.2 | -126.3 | -396.0 | -474.0 | -657.2 | -648.8 | -769.7 | -718.0 | -360.4 | 213.9 |
| Aerospace | 36,722.5 | 27,014.4 | 26,405.7 | 28,042.3 | 26,659.8 | 30,544.5 | 37,206.3 | 53,632.3 | 58,823.2 | 55,221.2 | 54,316.4 |
| Weapons and Nuclear | 1,210.3 | 945.6 | 1,164.2 | 1,063.0 | -109.8 | 645.7 | -587.0 | -125.3 | -1,016.3 | -1,148.8 | -365.6 |
| **Total** | **19,361.5** | **5,014.6** | **4,841.5** | **-17,472.8** | **-27,409.7** | **-37,024.2** | **-44,363.0** | **-38,278.8** | **-53,485.2** | **-55,554.4** | **-55,952.5** |

Note: The trade balance is the net of *total* exports minus total imports. Total exports include re-exports, whereas *domestic* exports are shipments of goods produced within the United States only.

Source: U.S. Department of Commerce



# Appendix A: Defining the High Technology Sector

**How was the sector definition arrived at?**

In 1995, BC Stats and the Science and Technology Division of the Ministry of Employment and Investment developed a definition of the high technology sector that focused on standard industries that produce high technology goods and services as their ultimate outputs. The definition looked at the high tech outputs of various standard industries (industries defined in the Canadian Standard Industrial Classification—SIC), their level of research activity, their representation in existing lists of high tech companies and the opinions of an expert panel drawn from government, university and the private sector.[18] The SIC data series has since been discontinued and a new classification system, the North American Industry Classification System (NAICS), has been implemented.

The adoption of NAICS-based industry definitions made it necessary to revisit the definition on which the high tech estimates were based, since many of the industry groupings previously used were no longer available. During 2001, in consultation with industry stakeholders, BC Stats developed a new definition of the high technology sector that was based on the NAICS industry categories. The process of developing the criteria for including or excluding specific industries in the definition was similar to that of the original SIC-based definition as commodity lists, research activities and company lists were once again examined. In addition, since an accepted SIC-based

[18] The complete methodology is presented in Lawrance, J. and Miller, S. *Defining the British Columbia High Technology/Knowledge Sector*. (1996). BC Stats, Ministry of Government Services, and Ministry of Employment and Investment, Government of British Columbia. (www.bcstats.gov.bc.ca/data/bus_stat/busind/hi_tech/ht_def.pdf)

definition was already available, an SIC to NAICS concordance was used as a starting point. [19]

The definition originally chosen (based on theoretical considerations) proved to be only a starting point, as much of the information required to compile high technology statistics was not available at the required level of detail. A working definition, based on availability of data, was adopted in order to prepare the estimates presented in the *Profile* report.

In 2005, that definition was expanded further to include various communications technologies. The new industries added to the existing definition were determined through a review of literature pertaining to high technology definitions in use elsewhere, particularly those from the American Electronics Association (whose definition has been widely used by institutions around the world) and Industry Canada.[20] The definition has been further tweaked to incorporate NAICS changes. Every five years NAICS is revised to reflect the emergence of new or expanded industries and often this includes industries in the realm of high technology.

**Are all high tech companies included?**

It is recognized that there are some drawbacks to the industry-based definition employed here. The first is that NAICS does not fully recognize industries of the "new economy." As a result, new products and services are often grouped in an industry that primarily produces similar but distinctly different products and services.

Second, it is difficult to capture the full breadth of high technology or knowledge-intensive activity in the economy through NAICS-based definitions. Innovation is not unique to a specific group of industries, but can be found throughout the whole economy. Some firms on the "leading edge" will be missed if they are classified in industries that, in aggregate, fail to show high tech characteristics. On the other hand, it is impossible to remove those firms that lag behind the norm in an industry.

The industries included in the definition adopted for this profile represent the core of the high technology sector. While it is certainly true that examples of creativity and innovation can be found in every industry, this definition, with its industry focus, includes only those industries where high technology activity is concentrated.

**Exactly which industries are included?**

The following table lists the industries that are defined, for the purpose of this report, to constitute the high technology sector.

**Industries in the High Technology Sector**

| NAICS | Industry |
|---|---|
| **Manufacturing Industries** | |
| 325189 | Other Inorganic Chemicals |
| 325410 | Pharmaceutical and Medicine |
| 333310 | Commercial and Service Industry |
| 334110 | Computer and Peripheral |
| 334210 | Telephone Apparatus |
| 334220 | Radio, Television Broadcasting & Wireless Communications Equipment |
| 334290 | Other Communications Equipment |
| 334310 | Audio and Video Equipment |
| 334410 | Semiconductor and Other Electronic Components |
| 334511 | Navigational and Guidance Instruments |
| 334512 | Measuring, Medical and Controlling Devices |
| 334610 | Manufacturing and Reproducing Magnetic & Optical Media |
| 335315 | Switchgear and Switchboard, and Relay and Industrial Control Apparatus |
| 335920 | Communication and Energy Wire and Cable |

[19] A more detailed discussion of the methodology is presented in Miller, S. and Adams, S. *Defining the British Columbia High Technology Sector Using NAICS*. (2001). BC Stats, Ministry of Management Services, Government of British Columbia. (www.bcstats.gov.bc.ca/data/bus_stat/busind/hi_tech/NAICSdef.pdf)

[20] Platzer, M., Novak, C.A. and Kazmierczak, M.F. (February 2003). *Defining the High-Tech Industry*. American Electronics Association. E. Wayne Clendenning & Associates (May 2000). *Comparison and Reconciliation of SIC and NAICS Industry Codes Used to Define Knowledge-Based Industries (KBIs)*. Industry Canada.

335990 All Other Electrical Equipment and Component

336410 Aerospace Products and Parts

339110 Medical Equipment and Supplies

**Service Industries**

511210 Software Publishers

512110 Motion Picture and Video Production

512190 Post-Production & Other Motion Picture & Video Industries

515210 Pay and Specialty Television

517111 Wired Telecommunications Carriers (Except Cable)

517112 Cable and Other Program Distribution

517210 Wireless Telecommunications Carriers (Except Satellite)

517410 Satellite Telecommunications

517910 Other Telecommunications

518210 Data Processing, Hosting and Related

519130 Internet Publishing and Broadcasting, & Web Search Portals

541330 Engineering

541360 Geophysical Surveying and Mapping Services

541370 Surveying and Mapping (Except Geophysical) Services

541380 Testing Laboratories

541510 Computer Systems Design and Related

541620 Environmental Consulting

541690 Other Scientific and Technical Consulting

541710 Research and Development in Physical, Engineering and Life Sciences

541720 Research and Development in the Social Sciences and Humanities

**Note:** For the purposes of this report, the manufacturing NAICS industries are grouped together as "Manufacturing." For services, Engineering (541330) is reported as a separate industry. The other industries are aggregated into groups to maintain confidentiality requirements and still allow for some detailed reporting. Computer and Related Services includes 511210, 518210, 519130 and 541510. The remaining 541 NAICS codes are grouped into a category called "Other Services." The 517 NAICS codes and 515210 are covered under a single "Telecommunications and Related" classification and 512110 and 512190 are grouped under "Motion Picture Production and Post-Production."

## High Technology Industries

**Manufacturing**

*325189 Other Inorganic Chemicals* Comprises establishments engaged in the manufacture of high tech inorganic chemicals such as enriched uranium and radioactive isotopes.

*325410 Pharmaceuticals and Medicine* Consists of firms engaged in the manufacture of drugs, medicines and related products for human or animal use, including cutting edge products developed through considerable research efforts.

*333310 Commercial and Service Industry Machinery* Contains establishments that manufacture machinery for use in commercial and service industries, including high tech optical instruments and photographic equipment.

*334110 Computers and Peripheral Equipment* Comprises establishments primarily engaged in the manufacture of computers and peripheral computer equipment such as storage devices, CD-ROM and DVD drives, optical readers and scanners, etc.

*334210 Telephone Apparatus* Contains firms that manufacture wired telephone and data communications equipment, including cordless telephones, facsimile equipment, local area network (LAN) equipment, etc.

*334220 Radio and Television Broadcasting and Wireless Communications Equipment* Consists of firms primarily engaged in manufacturing radio and television broadcast and wireless communications equipment, including satellites, GPS (global positioning system) and pagers.

*334290 Other Communications Equipment* Comprises establishments engaged in the manufacture of other types of communications equipment, such as traffic signals, fire detection and alarm systems, remote control units, intercom systems, etc.

*334310 Audio and Visual Equipment* Establishments engaged in manufacturing electronic audio and video equipment such as compact disc and DVD players, televisions, etc.

*334410 Semiconductor and Other Electronic Components* Consists of firms engaged in the manufacture of semiconductor devices and other electronic components such as circuit boards, microprocessor chips and other computer parts, fibre-optic connectors, etc.

*334511 Navigational and Guidance Instruments* Comprises establishments primarily engaged in navigational and guidance instruments such as air traffic control radar systems, sonar, etc.

*334512 Measuring, Medical and Controlling Devices* Establishments engaged mainly in the manufacture of equipment such as high tech medical devices, laboratory analytical and testing instruments, industrial process control instruments, etc.

*334610 Manufacturing and Reproducing Magnetic and Optical Media* Contains establishments primarily engaged in manufacturing magnetic and optical media such as compact discs, computer software, etc.

*335315 Switchgear and Switchboard, and Relay and Industrial Control Apparatus* Comprises establishments engaged in manufacturing electrical switchgear and protective equipment, including high tech switching devices.

*335920 Communication and Energy Wire and Cable* Consists of firms engaged in the manufacture of communications and energy wire and cable such as high tech fibre-optic cable.

*335990 All Other Electrical Equipment and Components* Comprises establishments engaged in manufacturing electrical equipment and components, including fuel cells.

*336410 Aerospace Products and Parts* Establishments engaged in manufacturing aircraft, missiles, space vehicles, etc.

*339110 Medical Equipment and Supplies* Contains firms that manufacture medical equipment and supplies, including high tech laboratory and dental equipment.

**Services**

*511210 Software Publishers* Establishments engaged in producing and distributing computer software.

*512110 Motion Picture and Video Production* Comprises firms engaged in producing motion pictures, videos, television programs and commercials.

*512190 Post-production and Other Motion Picture and Video Industries* Consists of establishments engaged in providing post-production services and services to the motion picture and video industries, including high tech special effects and animation.

*515210 Pay and Specialty Television* Establishments engaged in broadcasting television programs on specialty cable networks, pay television or satellite networks.

*517111 Wired Telecommunications Carriers (Except Cable)* Consists of establishments engaged in

operating and maintaining network facilities for the transmission of voice, data, text, sound and video.

*517112 Cable and Other Program Distribution* Establishments engaged in distributing television and radio programs via cable or satellite distribution systems.

*517210 Wireless Telecommunications Carriers (Except Satellite)* Comprises establishments engaged in operating and maintaining switching and transmission facilities to provide direct communications via the airwaves.

*517410 Satellite Telecommunications* Contains firms engaged in operating and maintaining satellite telecommunications facilities.

*517910 Other Telecommunications* Comprises establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking and telemetry, and radar station operation.

*518210 Data Processing, Hosting and Related* Consists of firms engaged in providing hosting or data processing services.

*519130 Internet Publishing and Broadcasting and Web Search Portals* Comprises firms primarily engaged in publishing and/or broadcasting content on the Internet, or in operating web search portals.

*541330 Engineering* Comprises establishments engaged in engineering activities in design, development and utilization of machines, instruments, systems, etc.

*541360 Geophysical Surveying and Mapping Services* Establishments engaged in gathering, interpreting and mapping geophysical data.

*541370 Surveying and Mapping (Except Geophysical) Services* Contains firms engaged in providing surveying and mapping services of the surface of the earth, including the sea floor.

*541380 Testing Laboratories* Consists of establishments engaged in providing physical, chemical and other analytical testing services.

*541510 Computer Systems Design and Related* Establishments that provide expertise in the field of information technologies through writing and supporting computer software, and computer systems design and maintenance.

*541620 Environmental Consulting* Comprises establishments primarily engaged in providing consulting services on environmental issues, using a staff of scientists, engineers and other technicians.

*541690 Other Scientific and Technical Consulting* Consists of firms engaged in providing advice and assistance on scientific and technical issues (other than environmental issues).

*541710 and 541720 Scientific Research and Development* Establishments engaged in research and experimental development in areas such as biotechnology, computers, physics, mathematics, etc.

Note that these NAICS codes are based on the 2007 NAICS definition, which includes some changes from the 2002 NAICS, including to some industries in the high technology sector. The industries affected are primarily related to Internet technologies. NAICS 517110 has been expanded to include a portion of 518111 and has been re-coded to 517111 Wired Telecommunications Carriers (except Cable). NAICS 517510 has been expanded to include another portion of 518111 and has been re-coded to 517112 Cable and Other Program Distribution. The remainder of 518111 has been grouped with 517310 and 517910 to form a redefined 517910 Other Telecommunications. Additionally, NAICS 516110 and 518112 have been grouped together into a new category, 519130 Internet Publishing and Broadcasting and Web Search Portals.



# Appendix B: Defining High Technology Commodities

**Defining high technology commodities**

Developing a definitive list of what commodities should be considered high technology is a difficult exercise. Leading technologies are continually evolving and what is considered high technology today may be classified as low tech tomorrow. As a result, the definition of high technology commodities must necessarily change over time. This means that data regarding high technology trade from 1999 may contain commodities that are no longer included in the 2009 definition. However, this does not mean that the data cannot be compared over time. It is still valid to look at growth rates over that period as long as it is clear that the rates represent growth in the changing definition of high technology, rather than a static basket of goods.[21]

The commodity list used by BC Stats to define high technology goods is based on the U.S. Bureau of the Census' advanced technology products (ATP) list.[22] The list of American commodity codes was matched against the equivalent Canadian codes. In many cases the codes matched exactly and no further effort needed to be expended. However, in other cases there was not an exact match, particularly for

[21] One technical limitation that may cause difficulty in temporal comparisons is when there are changes to the definition of Harmonized System codes. When this occurs, there may be a resulting unintended change to the high technology commodity definition. This is due to the fact that the code may now include or exclude commodities that it did not previously, such that these goods can no longer be separated out (or perhaps can be more finely defined, so that low technology commodities that previously had to be included can now be expunged from the definition). However, these changes are usually small and should not have a significant impact on the data.

[22] For a discussion of the development and content of this list, see: McGuckin, R. H., Abbott, T. A., Herrick, P. and Norfolk, L. (1991). *Measuring Advanced-Technology Products Trade: A New Approach.* U.S. Bureau of the Census.

exports, which are coded to only eight digits. For these commodity groups, further analysis was undertaken using available data from the U.S. Bureau of the Census and Statistics Canada to determine whether or not the majority of these codes were high technology (as defined by the ATP list). If it was judged that this was not the case, the commodity was excluded from the high tech definition. While this may result in some high technology products being excluded from the definition, it should be balanced to some extent by those commodity classifications that, although they are mainly high technology, still include some low tech goods. Since the ATP list itself is defined using classification codes, this kind of trade-off is already present in the definition. No exact measure of high technology trade is possible to achieve since high technology is subjective to begin with, but this definition should be in line with what most people would agree is high technology.

Note that a commodity need not be produced by one of the industries included in the industry-based high technology definition in order to be considered a high technology product. Some industries not included in the high tech definition, because they mainly manufacture low technology goods, may also manufacture some high technology products. Conversely, it is possible for those industries classified as high technology to also manufacture some products that are considered low tech.

**Calculating B.C. consumed imports**

At this time, Statistics Canada does not produce data on imports by province of consumption, rather, only by province of clearance. An estimate of B.C. consumed imports was derived using the consumption of Canadian imports of those commodities by the B.C. economy and applying this ratio to total Canadian imports.

**Data source**

Data for trade in goods are supplied by Statistics Canada and the United States Bureau of the Census and are provided through the Trade Research and Inquiry Package (TRIP) computer reporting system at BC Stats. TRIP offers user-defined tabulations of export or import statistics for British Columbia, Canada, the United States and other countries. Tabulations can include information on commodities, countries, U.S. states, years, months, mode of transport, etc.

**Commodity groups**

The U.S. Bureau of the Census has defined ten fields involving advanced or high technology commodities. Each field represents a large number of products and processes that are considered to be on the leading edge. These fields have been used to classify exports and imports in this report.

*Aerospace* Technological developments in this field include advances that allow planes to fly further, faster, higher, to use less fuel and to have quieter engines. Many of the advances have been adapted to military applications, such as vertical takeoff aircraft and aircraft that require shorter distances for takeoff and landings.

*Biotechnology* Biotechnology covers recent developments in recombinant deoxyribonucleic acid (DNA) research and genetic engineering. Obvious examples include drugs, enzymes and other therapeutic items. Common applications include agricultural production and the use of microorganisms for the production of drugs and other complex molecules.

*Computer and Telecommunications* This field covers technological advances affecting both computers and telecommunications hardware products. The primary advances in this field are in developing hardware that can process information more quickly. Important breakthroughs are expected in the areas of artificial intelligence and parallel processing.

*Computer Integrated Manufacturing* This field includes developments in robotics and numerically controlled (NC) machines. These products have a significant impact on industrial automation. Robots and NC machines perform increasingly sophisticated operations through developments in sensory and visual capabilities of machines. With these breakthroughs, the manufacturing processes have increased in flexibility and require less human intervention to operate and maintain production machinery. Many of the new automation technologies are made possible because of breakthroughs in

the application and development of faster, smaller components.

*Electronics* The miniaturization of electronic components is the most important recent technological advance in the field of electronics. Some technologies included are integrated circuits; semiconductors, such as transistors and diodes; and new developments in surface mounting of electronic components, such as capacitors and resistors.

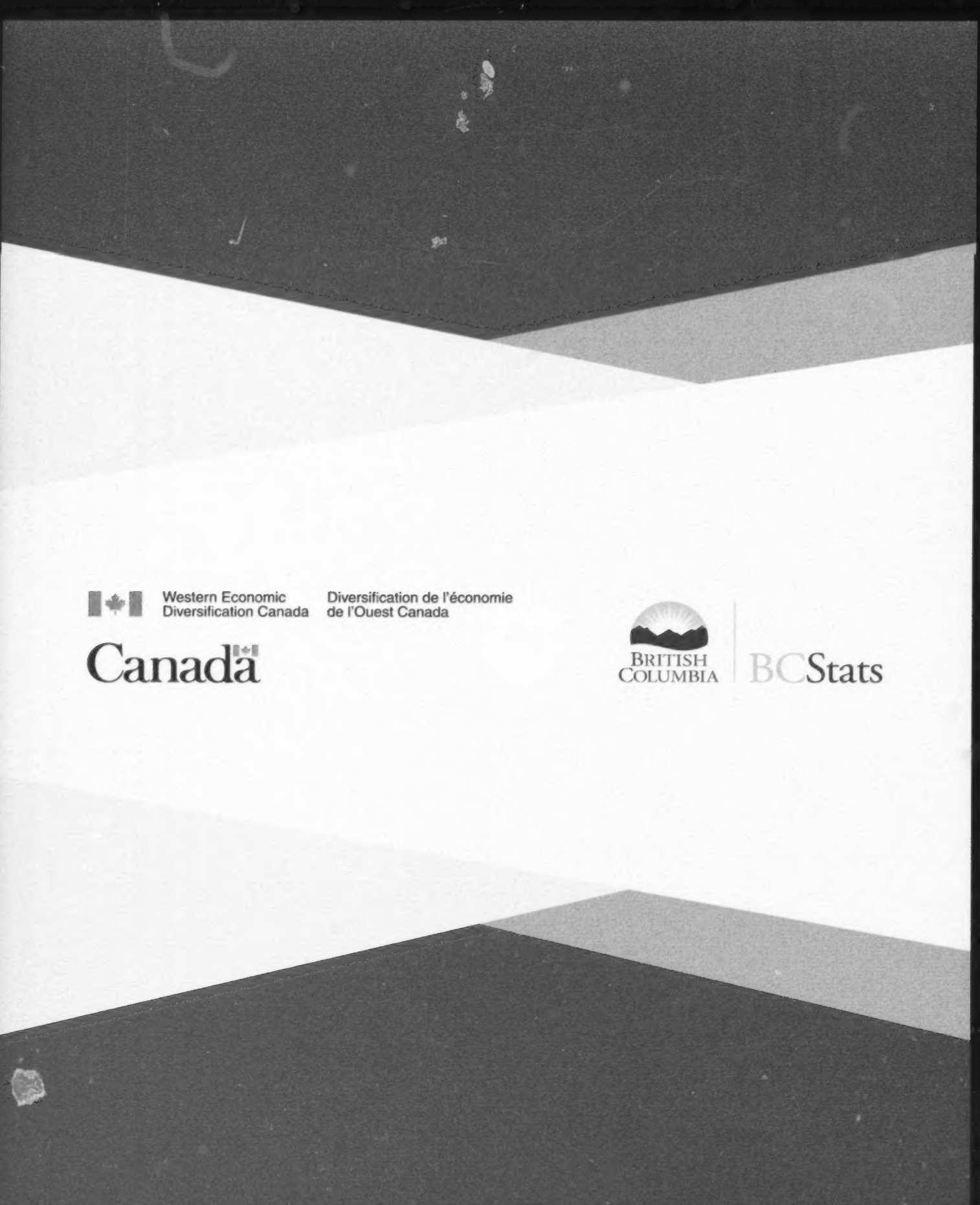
*Life Sciences (Medical)* This field encompasses the application of scientific advances to medical sciences. Nuclear resonance imaging, echo cardiographs and total-patient monitoring systems are examples of products developed from recent technological advances in this field. Also, recent increases in the strength of materials and reductions in their weight have led to improved internally-implemented fixation devices and prostheses.

*Materials Design* Materials design includes the newest methods of production for products that already exist in the market as well as the development of new products. Recent examples of technological advancements include high temperature superconductors, advanced polymers that expand the areas of plastic use and new ultra-clear glass that allows fibre-optic cable to be used for long distance communication.

*Nuclear Technology* This field covers developments in nuclear power production and primary nuclear reactors. It includes newly designed reactor components that improve the safety and efficiency of nuclear power plants. It also includes developments in the creation and packaging of nuclear fuel, and the application of atomic physics to medical and other areas of science.

*Opto-Electronics* Opto-Electronics is generally defined as the expanded development and application of the laser. Also included are recent advances in photoelectric cells and diodes, photographic and other imaging equipment, and fibre-optic cables.

*Weapons* This field covers all advanced methods used for the development, guidance, and control of weapons intended for national or personal protection and deterrence. Many of the developments in this area are the result of breakthroughs in computers and telecommunications as well as aerospace technologies.



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